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A HANDBOOK OF ASIA MINOR

VOLUME III. PART 2

THE CENTRAL PLATEAU WEST OF THE
KYZYL IRMAK

JULY, 1919

NAVAL STAFF

INTELLIGENCE DEPARTMENT

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NOTE

ASIA MINOR is treated in four volumes, two of which are issued in separate parts. The first volume contains information of a general nature. The other volumes are devoted to the detailed description of topographical features, railways, roads, and cities. The second volume deals with the western part of the peninsula up to the Dalaman Chai, the rim of the plateau, and the route of the Anatolian Railway from Afium Kara Hissar to Izmid. To the third volume (divided into three parts) are assigned the mountains of the north from the Bosphorus to the Halys, the central plains from Eski Shehir to Kaisari, and the mountains of the south from the Dalaman Chai to the Lamas Su. The fourth volume contains a description of the eastern part of the peninsula, and is divided into two parts, devoted respectively to the region between the Black Sea and Kaisari and to the country round the Gulf of Alexandretta—Cilicia, Antitaurus, and North Syria.

The estimates of mileage in the present volume are based in part on the approximate calculations of travellers on horseback, but to a greater extent on trocheameter measurements, which attain a fair degree of accuracy.

It is necessary to emphasize the fact that in the circumstances the information given cannot be complete or up-to-date, and may occasionally be inaccurate. The Admiralty will be glad to receive corrections and additions.



LIST OF MAPS FOR USE WITH THIS VOLUME

KIEPERT. *Karte von Kleinasien*. 1/400,000, Sheets B 2, 3, C 2, 3, 4.

ASIA MINOR. 1/250,000, War Office, G.S.G.S. 2097. Sheets : Eski Shehr, Sivri Hissar, Angora, Afium Kara Hissar, Ak Shehr, Suverek, Kaisarie, Isbarta, Beyshehr, Konia, Cilician Gates.

ASIA MINOR. 1/500,000, Naval Staff I. D., Admiralty. Sheets 7, 8, 13, 14.

Note.—The last is the only map which shows the Routes on the central plains, and many of the Routes in the mountain districts, described in this Volume.

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INTRODUCTION

General Geographical Description—Surface—Watersheds—Rivers and Lakes—Climate—Flora—Fauna—Population—Trade and Industry—Communications—Transport—Supplies—Telegraph System.

GENERAL GEOGRAPHICAL DESCRIPTION

ASIA MINOR consists of a lofty, oblong central plateau, with a rim of mountains and a fringe of coastland. The plateau lies about 3,000 to 4,000 feet above sea-level ; its surface is folded into ridges, or is level plain penetrated by volcanic cones. It is bordered on the north, west and south by a rim of mountains which divide it from the coast lands and make it appear as a huge interior depression. The mountain-rim is mostly of considerable breadth, formed of parallel chains, and generally deeply cut by water-courses.

The mountains on the south and east are higher than those on the north and west, and the plateau is tilted down towards the north and west. On the west, again, the mountain rim is not so distinctly marked on the north and south. But it is always present, and roads and railways have always to ascend to the top of a ridge and descend again some way towards the general level of the main central plateau. The mountain rim lies outside the area covered by this Volume, except at two points—the ridge north-east of Dineir, and the mountain mass between the lakes of Bey Shehir and Egerdir.

The mountains which edge the plateau on the north and south extend east and west in parallel masses, and fall steeply to the coast. On the west side the ridges, still maintaining the east-and-west direction, slope gradually down to the sea for a hundred miles, and are separated from each other by river valleys which provide avenues of communication between the coast and the interior. The chief of these valleys are those of the Hermus and Maeander, which carry the roads

entering the central plateau at Afium Kara Hissar and Dineir respectively. In the north-west a valley pierces the northern mountain rim transversely and conducts a road from the Bosphorus to Eski Shehir ; on the eastern side roads enter the central plateau through three main corridors—one leading from Erzerum to Angora, the second from Malatia to Kaisari, the third from Cilicia through the Cilician Gates to Eregli.

This volume of the *Handbook of Asia Minor* is devoted to a description of the mountains, plains, and undulating uplands of the central plateau, from the latitude of Eski Shehir and Dineir in the west to the Kyzyl Irmak, Kaisari, and the foothills of the Taurus range in the east, and from the Taurus range in the south to the Eski Shehir-Angora railway in the north. In a geographical sense this delimitation is an artificial one in more than one direction, but it is practically convenient in a description of the country which is concerned mainly with communications.

On the western side, the configuration of the river valleys and mountains up to the Eski Shehir-Afium Kara Hissar railway, and the chaussée from Afium Kara Hissar to Dineir, has been outlined in Volume II. The Taurus range on the south and south-east, and the lands lying below it to the south, have been described in Volume III, Part 3 and Volume IV, Part 2. The country north of Kaisari and east of the Kyzyl Irmak is dealt with in Volume IV, Part 1. For a general outline of the geography of the peninsula, Volume I should be consulted.

SURFACE

The central plateau of Asia Minor falls into three clearly marked divisions, which will be described in succession so far as they fall within the scope of this volume. These divisions are : (1) the East-Phrygian and Isaurian mountain systems, extending from Eski Shehir to Konia, and continued by the hilly region between Soghla Lake and Karaman ; (2) the Lycaonian steppe, occupying the centre of the plateau ; and

(3) the Cappadocian and Galatian uplands, which extend from the northern and eastern rim of the Lycaonian steppe to the northern mountain rim of the plateau. Only part of the third division, which is cut in two by the Kyzyl Irmak, falls within the area covered by this volume.

The East Phrygian and Isaurian mountain systems

East of the railway from Eski Shehir to Afium Kara Hissar, and of the road from Afium Kara Hissar to Dineir, the Phrygian mountain region is bounded on the north by a line drawn through Eski Shehir and Chifteler, and on the south by the corridor stretching from Soghla Göl to Dineir, and separating the Taurus range from the Sultan Dag and its south-eastern and south-western extensions. The principal heights in this region are the unexplored Türkmen Dag, south of Eski Shehir, which is believed to rise to 6,500 ft., and the Sultan Dag, which rises to 8,000 ft. south of Chai, and has a mean elevation of between 6,000 and 7,000 ft. An arc drawn from the Türkmen Dag south-eastwards, roughly parallel to the line of the railway, coincides with a more or less continuous ridge, which forms the watershed between the Sakaria, with its tributaries the Seidi Su and the Bayat Chai, and the Akar Chai, which runs into the central depression and whose valley forms a sort of gateway into the plains of the interior. North and north-east of Bolavadyn this ridge is rounded off by the Emir Dag, which forms the northern wall of the valley of the Akar Chai trough and which is succeeded in its turn by a series of lower ridges running south-eastwards to the neighbourhood of Ilghin. The valley enclosed between these ridges and the Sultan Dag, stretching from Bolavadyn to Ilghin, was called in ancient times *Phrygia Paroreios*. On the south side these ridges generally fall steeply down to the valley-bottom; on the north side their spurs and outliers slope gradually down to the Porsuk and Sakaria rivers. On this side the chief spurs are those north-east of Seidi Ghazi and south of Chifteler. East of Piribeyli lies a quadrangular group of ridges, culminating in the Bayat Kolu and Kurshunlu Dag,

which are separated from the main system by low passes and valleys to the west and south. South of this group, the level plain penetrates deeply into the hills, forming two bays called Eshme Ova and Durgut Ova. At the north-east corner of the Ak Shehir Göl, there is a low pass, which is succeeded by a series of valleys, separated by low ridges, as far as Piri-beyli. All the passes north-west of this one, as far as the Türkmen Dagħ, have to cross the ridge at a much higher level.

On the west this complex of mountains is continued, over the Porsuk valley, by a series of ridges and valleys to culminate in Murad Dagħ. The watershed between the Porsuk and the Akar Chai valleys is crossed by the railway between the stations of Düver and Ikhsanie.

The soil of the river valleys is fertile, and there is a fair amount of cultivation where water is available, especially in the valleys of the Akar Chai, Porsuk, and Seidi Su. The plain north of Azizie and Piribeyli is also dotted with patches of cultivated land. The Türkmen Dagħ, the mountains around Kümbet, and the Emir Dagħ are well wooded. Elsewhere, the hills are covered with scrub, or bare.

The valley of the Akar Chai has an average width of seven or eight miles. The soil is very fertile, but inundations restrict cultivation to the higher ground on either side. The valley is famous for its opium, which gives its name to the principal town—Afium Kara Hissar.

South of Chai the Sultan Dagħ bends south-westwards and sends a series of ridges down to the valley north of Ulu-borlu. These ridges are separated by a series of valleys, divided by low passes, from the irregular quadrilateral of mountain ridges to the south-east of Afium Kara Hissar. This quadrilateral is tilted down from west to east, the watershed running nearly due south from Afium Kara Hissar to the Dombai Ova, north of Dineir. Between the foothills of this western ridge, and the lower ridges to the east, lies the plain of Chifut Kassaba, which is watered by a stream flowing east and north to the Akar Chai, and produces crops of cereals.

The ridges bounding the plain on the north and south are low, and the roads cross them with easy gradients.

The series of valleys—Chöl Ova, Oinan Ova, Karamyk Ova—which separate this quadrilateral from the ridges which run from Sultan Dagħ to the south-west, are marshy or arid. Their chief importance is, that they provide an easy roadway from Dineir at the head of the Maeander valley route, to Chai on the alternative road from Smyrna, and on the road from Constantinople to the central plateau.

Another low depression separates the ridges continuing Sultan Dagħ to the south-west from the imposing mass of Borlu Dagħ, which towers up on the western side of Egerdir Göl to nearly 8,000 ft. This is the well-cultivated valley of Uluborlu, along which runs the road from Dineir to Yalovach. The Borlu Dagħ belongs to the mass of Taurus proper. Through the valley to the south of it, after crossing a high ridge west of Egerdir, runs the road and the railway from Egerdir to Dineir. On the southern edge of this valley, under a wall of mountain, lies Isparta, with a patch of cultivation to the north.

The Sultan Dagħ stretches south-eastwards from Chai for nearly 70 miles. It is a lofty broad-backed ridge with steep flanks cut by V-shaped valleys. On the north-eastern flank, in the neighbourhood of Chai, the Sultan Dagħ falls abruptly down to the plain, but as one travels south-eastwards, and as the range decreases in height, it throws out bold spurs towards the plain, some of which merge into the hills north and north-west of Ilghin, forming ridges over which roads must pass. This district is watered by a large number of streams flowing down from Sultan Dagħ, and there is a large amount of cultivation (chiefly cereals, opium, and fruit). On the south-western flank the shape of the ground is similar to that on the north-east, but on this side the longer and bolder spurs are towards the north-western end of the range, and here, too, the roads have to cross a monotonous series of rounded elevations, interspersed with fertile valleys, and running athwart the corridor between Sultan Dagħ and the main

wall of Taurus. A large amount of grain is produced in this region, especially below Yalovach and around Karaghach—the two chief towns in the district.

To the north-east of Bey Shehir Göl the Sultan Dagħ, after sinking to a broad pass over which goes the direct road from Ak Shehir to Konia, seems to spread out fanwise into a confused mass of ridges and peaks, whose structure and direction are very inadequately known. The most northerly rib of the fan is the lofty ridge which stretches from south of Ilghin to the pass between Konia and Ladik, over which it is continued by a neck connecting with the Boz Dagħ (see p. 16). This ridge, like the Sultan Dagħ, throws a series of bold spurs northwards into the plain. On the east it ends in a steep bluff towering over the valley of Sizma, which forms a conspicuous landmark in the plains to the north (see Route 21, mile 14½). On the south, this ridge is separated by the Bashara Su, flowing to Konia, from a group of peaks which appears to be the continuation of Sultan Dagħ proper, and whose most prominent members are the Ala Dagħ (6,500 ft.) and the Kyzyl Ören Dagħ. The Göstenik Dagħ and Loras Dagħ, overhanging Konia, belong to a ridge running north and south, which forms the backbone of the southern part of this system (here the metaphor of the fan breaks down). This ridge is called in different parts the Kayaly Dagħ, Üch Punar Dagħ, Egri Boyun Dagħ, and Alaja Dagħ, and it forms the watershed between the basin of the Bey Shehir Chai and the streams which run eastwards to the Konia plain. From this backbone parallel ribs run eastwards to the Charshembe Su and south-westwards to the valley of the Bey Shehir Chai, which here forms the dividing line between the central mountain system and the inner wall of Taurus. On the north, this ridge merges into the spurs of the most northerly ridge, forming a ledge falling rather steeply to the plain.

It thus appears that the axis of this part of the west-central mountain system is formed by a series of ridges running from Eski Shehir to Konia. There is one great breach in the series, the valley of the Akar Chai, which is the only important

avenue of communication from east to west through this inner fold in the mountains. On the north-west, owing to the gradual slope of the plateau as a whole towards the north, the drainage of both flanks of the main ridge flows off into the Sakaria. Through the valley of the Akar Chai there flows the drainage of a wide area round Afium Kara Hissar. The Sultan Dagħ divides a drainage area sloping to the central plains from one sloping to the great lakes, and, through them by underground channels, to the southern sea.

To round off the description of the mountain system lying between the Taurus range and the central plains, we may here include some account of the hill-country lying between the Charshembe Su and Karaman. South of this region, the Gök Su rises on the northern flank of the Taurus range, and flows eastwards for some distance before it breaks through Low Taurus (see Vol. III, Pt. 3, p. 13) to the sea. The northern rim of its basin, where it flows eastwards, is formed by a series of ridges, with rounded elevations, which extend eastwards from Siristat to Haji Baba Dagħ, west of Karaman, and then south-eastwards to join the main Taurus system at the Yedi Bel. The steep summit of Zengibar Kale (alt. 4,600 ft.) is the culminating point of the watershed between the Charshembe and Gök Su on the west: from here the ground slopes down gently towards the Charshembe valley on the north, and falls rather steeply to the Gök Su on the south. A festoon of lower ridges and peaks—Chokka Dagħ, Karachal Dagħ, Kuyusu Dagħ—connect Zengibar Kale Dagħ with Haji Baba Dagħ (alt. 5,600 ft.), a massive rounded mountain which towers impressively over the country west of Karaman. These ridges fall gradually down to the north through a tangled tract of hill country, covered with scrub, to the level plain, which is reached in the neighbourhood of Dorla and Güdelisin. North of Haji Baba Dagħ itself, a low ridge connects this system with the Kara Dagħ, which is described on p. 19. South-east of Haji Baba Dagħ the watershed between the coast and the interior depression runs along a well-marked ridge, which gradually increases in elevation towards the east.

The Lycaonian Steppe

The Lycaonian steppe, which stretches in level uniformity from the Emir Dagħ on the west to the vicinity of the Cilician Gates on the east, and from the Sultan Dagħ and the Taurus range on the south to the rim of the Sakaria basin, the Karaja Dagħ and the Pasha Dagħ on the north, is the most striking part of the central plains. This area is divided into two portions—a western and an eastern—by the Boz Dagħ, which runs into the plain north-east of Konia.

The lofty ridge which runs from the longitude of Ilghin to that of Ladik (p. 14) comes to an abrupt end in a steep escarpment south of Ladik. From the base of this escarpment the ridge is continued eastwards by a col of no great breadth which connects with the Boz Dagħ north of Egribayat. From this point the Boz Dagħ throws off two distinct ridges. One, the shorter, runs north-eastwards to a point a few miles north of Suverek, where it is succeeded by a series of isolated peaks rising sheer out of the plain and extending towards the Salt Lake. The other, the longer, runs south-eastwards to Genne, where it culminates in a peak which forms a good landmark in the plain to the east. It is indeed continued further southwards as a distinct rise in the plain, and even dips, four miles south of Genne, to a broad pass through which runs the road from Konia to Aryssama. The Boz Dagħ is a bare, treeless, waterless wilderness of subdued ridges and cols. It is nowhere of great height, but it forms a complete barrier to traffic except over a few low passes.

On the southern side, the western portion of the steppe is bounded by the outliers of the Sultan Dagħ and its eastern extension, already described (p. 13 f.). From these hills, numerous streams run down to the plain, extending a belt of cultivable land along its southern border. The western boundary is the series of hills between Ilghin and Piribeyli, which generally fall steeply down to the plain like a bold coastline to the sea. On this side no streams enter the plain, and this is its most sterile and uninhabited part. On the north,

the plain is separated by a region of low ridges from the southern slope of the Sakaria basin. The boundary of the level steppe in this region runs roughly from the Ak Gol to Insuyu : for a considerable distance west of Insuyu the boundary is represented by a remarkable ledge, facing south-westwards, which has probably been exposed by a fault in the limestone strata. Along the bottom of this ledge a stream flows eastwards past Inevi to the Salt Lake. North of this ledge, stretching as far as the Karaja Dagħ, lies a region of bold undulations, which belongs historically to Lycaonia but in geographical structure rather to the region of the Galatian uplands. On the east, this region again gives place to a level plain which extends around the northern portion of the Salt Lake.

North of the middle of this tract of steppe there rises a low ridge, the Ala Dagħ, aligned roughly north and south with two or three small villages on its eastern slope. South-east of Zebir lies a region of low hills and undulations, extending to the Murad Su, a sheet of salt water lying west of the Salt Lake. The central portion of the plain appears to the observer from a distance to be perfectly flat, but the traveller who crosses it finds it to consist of a series of very gentle undulations which continually restrict the view. The plain is covered in spring and early summer with a good growth of rough grass, which withers in July. It is tenanted only by shepherds ; agriculture is restricted to a few patches along its borders. Springs rise here and there, especially on the east and north-east ; elsewhere water is got from deep wells, and is often brackish.

The main settlements are Atlāndy, Kolu Kissa, Gozlu, Suverek, Cheshmeli Zebir, Insuyu, Inevi, Bulduk, Kozanlı, and Yarashly : at all of these there are springs or streams. This plain is the Axylos or ' treeless country ' of the ancient Greeks ; it lies at a height of about 3,200 ft. above sea-level.

The eastern portion of the Lycaonian plain lies at a mean altitude of about 3,300 ft., falling to 3,100 ft. at the Salt Lake. This portion of the plain extends from Konia to Nigde and

from the Salt Lake to Karaman. It is extraordinarily level, and has often been compared to the sea. Rising sheer out of the level plain, like islands in the sea, are a number of volcanic peaks and ridges, which stretch in a line from the Kara Dagħ, north of Karaman, to the Hassan Dagħ, south of Ak Serai. The most considerable member of the series linking up these two mountains is the Karaja Dagħ, a long ridge with a large number of volcanic peaks rising out of the plain east of Karapınar. Separated from the Karaja Dagħ by a broad pass on the north is the Aryssama Dagħ, a lower group with three peaks ; between Aryssama Dagħ and Hassan Dagħ the plain is level. Between Karaja Dagħ and Kara Dagħ stands a row of volcanic cones of no great height, whose location is not shown on any map. West of Karapınar there is a low ridge culminating in Üzejik Dagħ, and extending northwards as a steep ledge, facing eastwards. It is not known how far northwards this ledge extends : it is a marked feature in the landscape a dozen miles north of Karapınar.

Here again the drainage from the inner slopes of the mountain rim waters a strip of land along the southern fringe of the plain, and renders the deep soil very fertile. South-east of Konia this strip has been artificially extended by the enterprise of the Baghdad Railway Company, who have brought a good supply of water from Bey Shehir Göl to irrigate 100,000 acres of rich soil. The irrigation canal follows the bed of the Charshembe river, and is divided by a weir near Postaljyk into three main arms, which reach most of the level tract between Konia and Kara Dagħ. This part of the plain slopes very gradually down from south to north ; the lowest part lies round the village of Divanlar, near the Boz Dagħ. Close around the western foot of Kara Dagħ there is another depression, and here, as well as north and east of Konia, the drainage from the hill-sides forms extensive marshes in spring. The soil is rich and loamy, but in many places, especially in the depressions, it is covered with a coat of salt, or impregnated with saltpetre.

North of the Boz Dagħ the terrain slopes gradually down

through a region of level plain and gentle undulation to the Tuz Göl or Salt Lake (p. 34). Due south of the Tuz Göl, and extending towards Ak Serai lies a marshy area formed by streams flowing from Hassan Dagh or from springs in the plain towards the lake.

Between Hassan Dagh and Karaja Dagh on the north and west, and the inner wall of the Taurus range on the south and east, lies a wide flat plain drained and inundated by the sluggish stream flowing into the Ak Göl west of Eregli. The greater part of the plain is marsh or desert, but round the base of Hassan Dagh and Taurus there lies a series of cultivated patches, dotted with villages. The streams watering these patches are formed by the melting of the snow on the mountains, which continues till June. On the eastern fringe of the plain crops of cereals, vegetables, wine, fruit, and cotton are grown, and considerable herds of cattle are pastured.

Fifty miles south-east of Konia, and just north of Karaman, there rises from a depression in the plain, like an inverted cup in a saucer, a block of volcanic mountains, oval in outline, with the longer axis nearly north and south. This is the Kara Dagh. It is divided into two masses, a northern and a southern, crowned by the peaks of Mahalych and Bash Dagh respectively. Mahalych rises to nearly 7,000 feet above sea-level; Bash Dagh is a few hundred feet lower. The plain around the mountain is about 3,300 ft. in height. Under and close to either peak there lies a large crater; that on Mahalych is oval in shape and is said to be nearly three miles long. On the northern side two bold spurs, Maden Dagh and Kyzyl Dagh, enclose a valley between them in which lies the village of Maden Shehir, a miserable Yuruk settlement amid the ruins of a Byzantine city. The mountain sides are bare, with stunted trees and scrub in the valleys; a small wood in a sheltered valley on the northern side of Mahalych is the only timber on the mountain. To the north-east the foothills of Kara Dagh extend for some distance into the plain; elsewhere the mountain rises steeply out of the depression. Marshes form in spring on the west and south-east. On the

south the Davda Dag, a low ridge, blocks the way between the Konia plain and the plain of Karaman.

There remains the plain of Karaman, lying in a nook between Kara Dag and a northern ledge of Taurus. This plain is a low depression into which streams from Taurus discharge their water, forming a marsh which rises high enough in spring to discharge into the Ak Göl. A proposal has been made to deepen the channel leading to the Ak Göl, and thus extend the cultivable area around the marsh.

The chief centres of population in the eastern part of the Lycaonian plain are Konia, Karaman, Eregli, Nigde, Ak Serai, and Karapunar, all except the last lying on the fertile fringe of the plain near the points where the chief roads leave the plain. A considerable area on the south side of the plain has been or could be rendered suitable for cultivation by artificial irrigation. The remainder of the plain is steppe or salt desert, and maintains a scanty pastoral population.

The Lycaonian steppe, with the valley of the Akar Chai to the west and the marshes south-west of Erjies Dag on the east is the bottom of the vast inland drainage area which covers the larger part of the area described in this volume (see below, pp. 24 ff.).

The Cappadocian and Galatian Uplands

The region of uplands which occupies the northern and eastern parts of the central plateau of Asia Minor falls partly within the area described in this volume. This region, which corresponds roughly to ancient Galatia and Cappadocia, has the character of a land of transition between the northern mountain rim, with its central-European climate and vegetation, and the arid plains of Lycaonia.

The portion of this transition area with which we are concerned comprises the western hilly country to the south and west of the Kyzyl Irmak from Kaisari to Angora, and the basin of the Sakaria from the Kyzyl Irmak watershed to Eski Shehir.

Structurally, what distinguishes this area as a whole from

the Lycaonian steppe is that it consists of the upper parts of a series of river basins draining to the north, while the Lycaonian steppe is a flat depression, with no outlet to the sea. The region of uplands assumes the character of a land of downs and bluffs, cut by river valleys. Corresponding to the alternation of plateau and river valley, we find here a constant variety in the soil and vegetation—steppe alternating with agricultural land. The sense of variety is further strengthened by a gradual change in character from north to south. The river valleys which break through the northern rim of mountains carry the characteristic climate and vegetation of the northern area far back on to the plateau, while the steppes which divide the river valleys retain the features of the central plateau.

The Erjies Dagh, 13,000 ft., the highest mountain in Asia Minor, rises from a base level of 3,000 ft., and is divided by a deep depression, running north and south, into two groups. The eastern, the Koch Dagh, is 8,400 ft. high, and is richer in vegetation than the loftier western group. A couple of streams have deepened the depression to a gully with steep walls, which gives the most direct access from Kaisari to the south. Round the lower slopes of Erjies the streams irrigate gardens, meadows, and fields. On the south-west, close under the mountain, lies the Sultan Sazy, a marsh covered with reeds without any outlet. On the northern side the surface-water drains into the Kara Su and the Kyzyl Irmak, and Kaisari stands on the edge of a belt of fertile land.

A low ridge of stony steppe separates the depression around Erjies Dagh from the volcanic region to the west. Here wide valleys with perpendicular sides and flat bottoms have been hollowed out of the layer of tufa by the action of water, in which stand a grotesque assemblage of pyramids and pillars of the soft rock, generally owing their preservation from erosion to a hard stone on the top. On the floors of the valleys straggling villages appear among gardens and vineyards, the houses being caves in the rock with a façade of masonry. Here and there there is room for a small town, such as Ürgüb

and Nev Shehir. Towards the south and west, undulating steppe, grazed by Turkmen shepherds, extends as far as Hassan Dagħ.

Hassan Dagħ marks the extreme limit of this formation on the south-west. It is a rounded volcanic mass, 7,000–8,000 ft. in height, with two peaks which form a landmark in the Lycaonian plains up to the neighbourhood of Konia and Suverek. Immediately west of it the level plain begins. North of Hassan Dagħ streams flow down to join the Tuz Göl, watering the fertile little valley of Ak Serai on the way.

To the north-west of Nev Shehir, extending as far as the head of the Tuz Göl, lies a little-known tract of hill country, with ridges aligned from north-west to south-east. The volcanic surface is pierced by rounded ridges of granite, and the valleys afford pasture to large flocks of sheep. The highest of the ridges is the Ekejik Dagħ, which forms the watershed between the Kyzyl Irmak and the Tuz Göl, and whose highest point forms a landmark in the plains to the west. The road from Kaisari to Angora passes along a valley between Ekejik Dagħ and Sary Karaman Dagħ, round whose northern slope the drainage of the valley runs off to the Kyzyl Irmak.

At the foot of a valley carrying a stream down from the hills to the Tuz Göl, beside a small patch of fertile land, lies the town of Koch Hissar. North-east of Koch Hissar the Angora road again passes along a valley between two ridges, and issues on the level plain—part of the Lycaonian trough—which extends to the foot of Pasha Dagħ.

North of the Pasha Dagħ, which is an eastern outlier of the Karaja Dagħ, running to the Kyzyl Irmak, the watershed lies much farther to the west, and the Agy Özü stream drains a wide stretch of barren steppe land into the Kyzyl Irmak above Cheshnir Köprü.

The Agy Özü basin is bounded on the north-west by the bare Küre Dagħ, which is separated, in its turn, from the parallel ridge of Elma Dagħ by the well-watered Tabanly Su valley, in which cultivation alternates with marsh. The Elma Dagħ approaches 6,000 ft. in altitude ; its rounded outlines are

topped with forest and scrub. On the north-west, Elma Dagħ slopes down to the Angora valley—a region of surpassing fertility, supporting a large population. The roads from Angora to the south pass over a lower ridge to the west of a deep gorge, which marks the western end of Elma Dagħ.

The watershed between the Kyzyl Irmak and Sakaria basins, so far as it affects the area with which we are dealing, runs roughly along the line of the Konia-Angora road from the Karaja Dagħ to Chatal, and then north-eastwards along the ridge of Elma Dagħ. West of this line, and south of the railway, the country falls down very gently in broad steps, broken by river valleys, towards the Sakaria. The chief of these valleys are the valley of Yapan Hammam, the central town of the Haimane, and the valley of the Katranjy or Ilija Chai, which, with its tributaries, affords room for a certain amount of cultivation. These valleys are separated by a low ridge, Chal Dagħ and Ardyj Dagħ, lying near the centre of the Haimane.

The Karaja Dagħ (altitude unknown) is an imposing ridge which slopes down to the east as Pasha Dagħ, and is continued towards the south-east by an outlier which separates the valley of Kozanly from the Tuz Göl. This outlier is succeeded on the south by Tavshan Chale Dagħ, a low ridge to the east of the plain of Bulduk. The highest peak of Karaja Dagħ, called locally Kyrklar Tepe, is about 10 miles NNE. of Kozanly. On the northern side of the mountain a small lake, about 1 mile broad, called Göghler Göl, overflows into a marshy plain with no outlet, and south-east of this lake a stream flows off to the Ajy Özü valley and the Kyzyl Irmak. Not far to the west a valley runs westwards, meeting at right angles the valley of the Zebiri Balia Chai, a stream which flows southwards through a fertile valley into the Samsam Göl, west of the Karaja Dagħ. The water from this lake may find its way into the valley of Kozanly—the question is not settled—but the watershed between the central depression and the Sakaria must lie along the high ground to the west of the Samsam Göl. Farther south, it runs near Kelhassan and Katyryly Yaila.

Hence to the Ak Göl further exploration is required to trace the watershed between the central depression and the Sakaria. In the region north and west of the Ak Göl, and where the ground slopes down from Azizie and Piribeyli, several fine springs rise and flow into the Sakaria.

The valley of the Porsuk from Eski Shehir to its junction with the Sakaria, is either marsh or waste. On the south it is bounded by a ridge of hills, high opposite the river-bend between Sary Köi and Biçer, and gradually sinking on either side, especially on the east, where they merge into the gently undulating waste tableland which fills the corner between the two rivers. The southern slopes of this ridge roll down to a long valley running westwards from Mülk, which rises more sharply up to the slopes of the Günüsü Dagħ. The valley is drained by the Mülk Su and its tributaries, flowing north-east to join the Porsuk Su. Sivri Hissar, the chief town of the district, lies on the western slopes of Günüsü Dagħ, a massive ridge running south for twelve miles, and then bending eastwards along the Sakaria valley. Its southern and western slopes are mostly bare, but the country lying in the angle to the north is well-watered and fertile, and covered with villages among trees and gardens.

North-west of Sivri Hissar a low rounded ridge extends to the vicinity of Eski Shehir, and divides the Porsuk from the Seidi Su valley. Near the western end of this ridge are the meerscham mines for which Eski Shehir is famous. The open valley lying between this ridge and the mountains described on p. 11 is mainly steppe or marsh, with little cultivation.

WATERSHEDS

The greater part of the plateau of Asia Minor, taken as a whole, is drained by rivers which flow to the Black Sea. In the area covered by this volume there rise streams which flow north, west, and south, as well as streams which flow into the central depression. The flow of water in this area is therefore

a complicated problem, and doubt still exists as to some of the facts.

Beyond the extreme western limit of our area, 30 miles west of Afium Kara Hissar, the slightly elevated rim of the plateau divides the basins of the Sakaria, the Maeander, and the Akar Chai, the first two flowing to the sea, the last into the central depression. The watershed between the Porsuk (a tributary of the Sakaria) and the Akar Chai runs along the arc of ridges described on p. 11. The southern and eastern watershed of the Sakaria basin from the Ak Göl to Angora, so far as it is known, has been traced on p. 23 f.

From Angora to Kaisari, the western watershed of the Kyzyl Irmak basin is generally close to the river. At the northern end of the Tuz Göl the Kyzyl Irmak is separated from one of the lowest parts of the central depression by a low plateau only 15 miles wide.

The Zamanty rises far to the north-east of Kaisari, and breaks through the Taurus range to the plain of Cilicia. Farther west, as far as the valley of the Gök Su, the Taurus range forms the watershed between the central plateau and the southern sea. Between Erjies Dagh and Hassan Dagh there runs a secondary watershed, which divides the Kyzyl Irmak basin from the depression south of Erjies, in which the water forms a marsh and escapes by evaporation. East of Nigde, on the col between Hassan Dagh and the northern outliers of the Taurus range, the flow of water is again divided between the Erjies depression and the great Lycaonian depression.

The Gök Su rises on the northern flank of the Taurus range and flows eastwards through the northern foothills for some distance before it descends through the great breach in the range north-west of Selefke. The watershed between the Gök Su and the Charshembe Su runs not far from the road from Siristat to Almasun (Route 40). Both streams (the Charshembe Su being here known as the Siristat Chai) rise on the north-eastern flank of the Taurus range, south-west of Siristat, and their upper courses are separated by a spur of Taurus. Just north of the source of the Charshembe Su

a number of streams disappear into an underground channel, and escape under Taurus to the southern sea.

Farther to the north-west there is a large catchment area which appears to drain off, almost as if by choice, into the Mediterranean or into the Konia plain. A channel is shown on the maps running eastwards from the Soghla Göl, and apparently joining the Siristat Chai to form the Charshembe Su. This is only half the truth.

The Lake of Bey Shehir drains the south-western flank of Sultan Dag, and the western slopes of the mountains west of Konia (see p. 14), but is no doubt mainly fed by springs under its surface. The surplus water flows out, at its south-eastern end, by the Bey Shehir Irmak, and makes its way into the Soghla Göl. The further course of this water is wrapt in mystery. There is an underground exit near Arvan, on the south of the Soghla Göl. The level of the water in Soghla Göl varies from year to year; it is said that the lake occasionally dries up completely. The theory has been stated that the underground exit becomes blocked up from time to time, and that the water rises until the passage is reopened. The water is said to rise sufficiently, at intervals, to run off through the channel leading into the Charshembe gorge. There is evidence that this channel was used, and probably kept open, in ancient times, since when it has become silted up. In regard to the water from Bey Shehir Göl, Art has intervened between the divided counsels of Nature, and the water is now carried in a canal round the eastern edge of Soghla Göl and down the gorge, to irrigate the plain of Konia (see pp. 29 ff.).

Farther to the west Sultan Dag forms the watershed between the Ak Shehir Göl and the Egerdir Göl. The principal feeder of the latter lake is the stream which waters the valley of Yalovach; a few other inconsiderable streams flow into it, and no doubt here, too, springs under the surface supply the bulk of the water. The surplus water of this lake flows off by the Boghaz Su, at its southern end, into a small lake to the south (Koghade Göl), whence it makes its way to the southern slope of Taurus by an underground passage.

These underground passages, which are a feature of the whole Taurus area in the south of Asia Minor, are called by the Turks *düden*, and by the Greeks *katavothra*.

North-west of Borlu Dag, the line of Jebel Sultan, Ak Dag, and Burgas Dag, is the rim of the central plateau. But the rim is broken through by the Kuru Chai from the plain of Sandykly, and a *düden* carries the drainage of the Dombai Ova under Sultan Dag into the plain of Dineir. The water-parting between the central depression and the west coast lies farther to the east, and runs from the ridge between the Chöl Ova and the Oinan Ova along the western ridge of the quadrilateral of mountains south of Afium Kara Hissar. The western slopes of this ridge drain into the Sandykly Ova and the Maeander, the eastern slopes drain into the Akar Chai. Between Afium Kara Hissar and the point 30 miles west of it from which this survey started, the watershed between the Maeander and the Akar Chai runs along the ridge bounding the Sychanly Ova on the south, and then runs north-west to cross the Smyrna-Kassaba railway a mile and a half west of Tolumpunar station, and mount a spur of Murad Dag.

It will be clear from the above that the watershed of the central depression is much more restricted than the rim of the central plateau, which is broken through by valleys and gorges, or pierced by underground channels, in every direction.

RIVERS AND LAKES

It will appear from what has been said in the last section that a division of the drainage areas by means of rivers and lakes would be artificial. There follows a description, in succession, and in so far as they belong to our area, of the Sakaria, the Kyzyl Irmak, Ak Göl and its affluents, the Bey Shehir Göl-Soghla Göl-Charshembe Su group, Egerdir Göl, Ak Shehir Göl and its affluents, Chaushjy Göl and its affluents, the rivers of the mountains west of Konia, and the Tuz Göl. It will be seen that many of the lakes in the plateau are mere stages in the course of the rivers, which may leave them either above or below the surface of the ground.

The Sakaria

The Sakaria rises full grown in a set of springs near Chifteler, and flows eastwards round the Gütüsü Dagħ to where it is crossed by the Eski Shehir-Angora railway east of Sivri Hissar. It carries a considerable body of water at its source, and is joined a little lower down by the Seidi Su, which flows from the valley of Kümbet past Seidi Ghazi. Farther to the east, it receives another tributary from the valley of Bayat and Azizie, and from here to where it bends north near Kabak it is fed by several springs on the south bank, the most considerable being those of Gök Pınar and Yusuk Bashy, north-east of Cheltik. Farther north, the Sakaria is joined by Ilija Chai, which drains a large part of the Haimane, west of Karaja Dagħ. On its largest tributary in this region, the Porsuk, see p. 24 and vol. ii, p. 64. The Sakaria, so far as it belongs to the central plateau, runs sluggishly through marshy land covered with reeds. The river is bridged at Chandyr (east of Alikel), south of Bala Hissar (Fethoghlu Köprü), north of Kabak, and east of Sivri Hissar (Kavunçy Köprü and Beylik Köprü). The railway crosses the river beside Beylik Köprü.

The Kyzyl Irmak

The Kyzyl Irmak is the longest river, and its valley one of the most populous, in Asia Minor, but the section of it which falls within our area is probably the least important section. From Kaisari to Angora the valley is narrow, and there is little room for settlement. Rock salt is quarried at various points, especially at Tuz Köi, north-west of Nev Shehir. The principal bridges are those on the Kaisari-Angora chaussée which runs by Kyrshahir—Boghaz Köprü and Cheshnir Köprü (see vol. iv, part I)—and Kesik Köprü, south of Kyrshahir. There is a ford at Yakshy Khan on the road from Angora to Yozgad (see Route 60).

Ak Göl and its Affluents

West of Eregli, near the Baghdad Railway line, the Ak Göl occupies the bottom of a swampy depression which extends

a considerable distance to the east and west. North and west of Eregli the marshes are formed by the sluggish Kyzylja Su, which flows from Nigde and the slopes of Hassan Dagħ and converts a large area into a swamp. This stream is joined by the Ivriz Su, a fine stream flowing down a valley south-east of Eregli, and broken up into a number of irrigation channels as it approaches the town.

On the western side of the lake, the Divle Su, except after heavy rain, is entirely used up for irrigation before it reaches the lake. And it is only after heavy rain or when the snow is melting that the Soghla Su, which carries the overflow of the marshes north of Karaman, makes any contribution to the Ak Göl. The Soghla marsh is formed by four streams : (1) the Ibrala Chai from Kyzyllar, which discharges 1,800 cubic metres an hour ; (2) a stream from Kara Dagħ ; (3) the Kara Köprü Su, which flows west of Karaman ; and (4) the Chaush, which rises in a small marsh in the plain of Karaman to the north of the railway near Sidrova and empties into the Soghla marsh.

In the early spring the Soghla marsh overflows and the water is said to flow to the Ak Göl to a depth of one yard. A proposal has been made to deepen the channel between the two lakes and thus extend the cultivable area north of Karaman.

The Ak Göl is normally about 12 feet deep. Its superficial area varies with the season. There is a *düden* on its southern shore through which the flood water runs off underground. See Route 44 (alternative road).

Bey Shehir Göl, Soghla Göl, and the Charshembe Su

The relation of this connected group to the problem of the watershed of the central depression has been discussed on p. 26. It remains to give some account of the members of the group, and of the irrigation system which brings the water to the plain of Konia.

The Bey Shehir Göl is about 30 miles long and has a mean width of about 10 miles. In superficial area it is smaller than

the Tuz Göl, but its greater depth makes it the most considerable body of water in Asia Minor. On the east and south its banks are flat and in part marshy ; on the west the mountains fall steeply to the water's edge, rendering a road along this side impossible. Streams enter the lake on all sides—none of them of any importance. The lake is rich in fish. It is studded with islands, more extensively than is shown on the maps. One of the islands is occupied by a colony of Kosak fishermen who migrate between Manyas Göl (see vol. ii, p. 75), Ak Shehir Göl, and this lake. The water has a grey milky colour, and the natives do not drink it.

The surplus water of the Bey Shehir Göl is discharged into the Bey Shehir Irmak whose course winds over the bottom of a flat trough between the mountains, and discharges into Soghla Göl, draining the mountain slopes to the north as far as Kyzyl Ören (Route 34).

Soghla Göl is surrounded by rich land on the north-west and east ; on the south the wall of Taurus rises sheer above it. The area of cultivable land round this lake varies from year to year with the rise and fall of the surface.

The principal branch of the Charshembe Su rises in the Taurus range above Siristat ; this branch enters the Charshembe gorge some ten miles below its upper end. The gorge extends from a point four or five miles from the edge of Soghla Göl down to a point five miles west of Appa Serai, a total length of twenty-four miles. From this point the river runs through foothills to the Konia plain, crossing the Baghdad Railway near Chumra Station.

The Baghdad Railway Company have executed an ambitious scheme of irrigation in this area, whereby the surplus water of Bey Shehir Göl is brought to the plain of Konia through the Bey Shehir Irmak and the Charshembe gorge.

The relative elevation of the two lakes and of the plain of Konia, as ascertained by the Company, are as follows : Bey Shehir Göl, 3,674 ft. ; Soghla Göl, 3,601 ft. ; Chumra, 3,319 ft. ; (Kashyn Khan, 3,326 ft. ; Konia, 3,365 ft.).

The scheme aimed at diverting the Bey Shehir Irmak around

the head of the Soghla Göl by means of a canal, and carrying the water directly into the Charshembe gorge. By this means it was hoped to drain the Soghla Göl and render its floor available for cultivation. It was arranged, accordingly, that 500,000 dönüms (177 square miles) of land should be irrigated in the Konia plain, and 80,000 dönüms (28 square miles) on the Soghla Göl. As the work proceeded, it became doubtful whether Soghla Göl could be drained, and 60,000 out of the 80,000 dönüms in the contract were assigned to the Konia plain, while it was hoped to irrigate 20,000 dönüms round the shores of the Soghla Göl.

A barrage has been constructed at the outlet of Bey Shehir Göl to regulate the flow of water into the Bey Shehir Irmak. The Bey Shehir Irmak has a course of some eighty or ninety kilometres. Its course has been cleaned and straightened, and the banks strengthened. At km. 64 a canal (the ' Junction Canal ') takes off, and, passing along the northern shore of the Soghla Göl, joins the Balyklavu canal. The Junction Canal is 32 km. long. In time of rain, surplus water is diverted by sluices into Soghla Göl.

At Serai, near the eastern shore of Soghla Göl, a barrage has been constructed which controls the outlet from the lake. From here to below Balyklavu reaches a canal 20 km. long, and a further canal, 30 km. long, has been cut through the gorge to the point where the Siristat Chai enters. Thereafter, the water from Bey Shehir flows in the channel of the Charshembe river, which has been cleaned and strengthened.

Not far below Appa Serai, No. I main distributing canal takes off; here there is a barrage with regulating sluices. Near Tavshan Köprü (see Route 44) this canal is carried across the Charshembe Su in an aqueduct of reinforced concrete, and then runs west of north, passes under the Baghdad Railway 9 km. from Konia, and ends in the plain east of the town.

Shortly after the Baghdad Railway crosses the Charshembe Su a barrage has been constructed across it to hold up the water for the intakes of main distributing canals Nos. 2 and 3.

Canal No. 2 runs to the east, and irrigates an area stretching down towards Kara Dagh.

Canal No. 3 runs for a short distance parallel to the river and then turns north.

At a point some six miles east of the railway the Charshembe Su divides into three channels, which have long been used by the natives for irrigation, with a native stone barrage above the junction regulating the discharge. Beyond the area irrigated by this native system there is much land suitable for cultivation, but the native system used up the water. A masonry barrage was therefore constructed by the Baghdad Railway Company upstream from the native barrage, and a canal is led off towards the north, to irrigate a further area.

For an account of the road constructed for the maintenance of the canal see Route 39.

Egerdir Göl

The Lake of Egerdir extends from north to south for thirty miles. A promontory on the western bank, thrown out by the mass of Borlu Dagh, approaches to within a mile and a half of the eastern bank, cutting the lake into two separate basins. The northern and smaller basin is called Hoiran Göl, and the larger Egerdir Göl proper. The distinction was similarly recognized in the ancient Greek name *Limnai*, or 'The Lakes'. The southern part of the lake is ten or eleven miles wide. It is shut in by high mountains, falling steeply to its shore except on the southern side where there is a fertile cultivated valley, and on the north-east, where the lake leans against the fertile valley of Yalovach. The lake is rich in fish. Its outlet is the Boghaz Su, which forms many *düdens* before it reappears as the Koghade Göl on its way to the Mediterranean.

Ak Shehir Göl and its Affluents

The Ak Shehir Göl is similar in character to the Ak Göl west of Eregli except that here there is no record of an underground exit; but such must exist as so large a quantity of drainage cannot be kept at a low level by evaporation only.

It fills the lowest part of the depression of *Phrygia Paroreios*, lying six to ten miles north of Ak Shehir, and into it flows the drainage of the whole valley from the rim of the plateau west of Afium Kara Hissar to the ridge separating the plains of Ak Shehir and Ilghin. For some miles east of Afium Kara Hissar the Akar Chai flows within its banks, but in the neighbourhood of Chai it opens out into a marshy area which covers most of the plain as far as Ak Shehir Göl. The centre of this marshy area has the character of an independent lake, and is called Eber Göl. In the rainy season the level of the Ak Shehir Göl rises, and the whole of this area, for some distance to the west of Chai, is frequently under water. There are bridges over the Akar Chai west of Afium Kara Hissar, between Sürmene and Afium Kara Hissar, west of Chobanlar, on the chaussée from Chai to Azizie (where there is a ford west of the bridge) and near the Eber Göl. The last is an early Turkish bridge with several arches, which is little used except during the dry season as giving a short cut from Bolavadyn to Ak Shehir.

The Akar Chai drains the southern slopes of Emir Dagħ, and the valley of Chifut Kassaba (see p. 12). It enters Ak Shehir Göl at its western end.

On the south the Ak Shehir Göl receives an affluent (the Yusuf Yilan Chai) which drains the slopes of Sultan Dagħ as far as Doghan Hissar, and is fed by a large number of brooks which fertilize the valleys of the mountain side.

The lake itself is marshy round its edges, and is hidden by tall reeds, except at its north-western corner. There is a certain amount of fishing on the lake (cf. p. 30).

Chaushjy Göl and its Affluents

North-west of Ilghin there is a lake cut across the middle by a marshy belt, which is fed by two streams similar in character to the Yusuf Yilan Chai, the Arkut Khan river, and the Ilghin Su. A road shown on the maps crossing between the two halves of the lake can seldom be practicable, as the area dividing them is very marshy. The valleys of the two feeders of the Chaushjy Göl are very fertile.

The Rivers of the Mountains West of Konia

These streams have a uniform character, and can be described together. Most of them are mere intermittent torrents which come to life only in the wet season when they flood the plain at the foot of the mountains. Permanent streams are : (1) The river which flows from east of Ilghin to Kolu Kissa, to meet another permanent stream from the neighbourhood of Serai Önü. How far north this stream extends into the plain is not known. (2) The Bashara Su, which waters the vicinity of Konia, and turns a desert into a garden. (3) The river of Khatyn Serai and Kavak, which is shown on the maps as joining the Charshembe Su, but almost certainly flows independently till it loses itself in the plain near Ali Bey Hüyük.

Tuz Göl

The great salt lake, called Tatta Lacus by the Romans, lies at the bottom of the Lycaonian depression. Tested by its superficial area, it is the largest lake in Asia Minor, but it is very shallow, and does not contain so much water as the Bey Shehir Göl. It is roughly oval in shape, extending from north-west to south-east. Having no outlet, the water of the lake is salt, and when the water evaporates in the summer a thick crust of salt is formed round the edges of the lake, and exploited by the Turkish Government. The water of this lake is said to contain 33·2 per cent. of salt, as compared with 21·7 per cent. in the Dead Sea.

Into the Tuz Göl run many watercourses, coming from all directions ; the most important is the Beyas Su, which drains a large area north of Hassan Dagħ, and has a perennial flow. The springs which rise in the neighbourhood of Sultan Khan, the Insuyu, and the stream from Koch Hissar are the next in importance. The volume of water, and the extent of the lake, increase and decrease with the season. It reaches its greatest extension in March and April, when the whole basin is filled, and marshes extend around it, especially on the southern side. In the summer months the level gradually sinks till in October

there is water only in the deeper parts towards the southern end. As the water recedes, it leaves a thick crust of salt, which is cut into blocks and loaded on camels.

While the remaining banks are perfectly flat, a low ridge of red sandstone rises up on the eastern side. In the northern part of the lake a peninsula juts out from the west. Here there is a causeway over the lake, built by Sultan Murad IV in 1639, which can still be used when the water is low. This causeway carried the old road, now completely disused, from Afium Kara Hissar to Koch Hissar.

CLIMATE

The climate of the plateau of Asia Minor is very different from that of the surrounding coastlands (see vol. I, chap. III). The rim of mountains withholds most of the moisture coming from the sea, and in general the climate becomes progressively drier as the interior is approached from any direction.

There are no exact records of the distribution of rainfall over the different seasons, but the summer is the driest and the spring (March and April) the wettest period. In addition to the spring rains, there is a secondary rainy season occurring in autumn in the western and southern districts, and in early winter in the north. The rains are generally of short duration, but often very heavy. In early summer, thunderstorms frequently attack districts near the mountain rim.

The greater part of the central plateau has a mean annual rainfall of 8-14 inches. Inside our area the rainfall decreases from west to east and from north to south. As contrasted with an annual rainfall of 13-20 inches in the western river valleys, Eski Shehir has 10-11 inches, Angora a little over 9 inches, Konia barely 7 inches.

There exists, however, considerable variety in the local distribution of rainfall. The Phrygian mountain region, for instance, experiences a good deal of rain (reaching it from the south and west), and it often happens, throughout the early summer, that the Sultan Dag and the plains close under it

are rained on for days on end, while the plains farther to the north and east are unaffected.

For the latitude, the mean annual temperature is low. There is much overclouding in winter, but little in summer. There are no exact figures relating to conditions of temperature. In general the summers are very hot, with a temperature of 86° to 95° F. and sometimes more. On the other hand, there is considerable cooling-off at night, on account of the high altitude. Even in midsummer variations in temperature up to 36° and even higher have been observed. Spring is generally cooler than autumn, the reason being partly the presence of snow on the mountains, which takes a long time to disappear. The winters are cold, and often very snowy, especially towards the east. Long, sharp, and continuous frosts are not rare, and many places remain snowed up for weeks. On the mountain chains snow lies till far into the summer, with the result that their slopes and valleys have more moisture in midsummer than the adjoining plains. The winter temperature varies much with the locality; in valleys and depressions it is much lower than on hillsides and plains at the same level above the sea.

In general it may be said that the climate of the central plateau runs to extremes—cold winters with snow and severe frosts; dry summers with clear sky, heat intense by day, nights cool, giving a relatively low mean temperature.

FLORA

The vast forests of the northern and southern mountain ranges diminish to a narrow belt as the plateau is reached, first of straggling pines along the ridges, and then of oak and juniper. On the bare plateau itself a tree or a shrub is rarely to be seen, and often for miles there is no growth higher than a few feet. The ridges which traverse the plain are usually quite bare, and only in the valleys is there any soil where plants can struggle for existence.

Bushes hardly exist on the plain itself. Here there is only low scrub, scattered thornbushes, and grass.

The border region of the plateau was probably better wooded in former times than at the present day. The deforestation coincided with the influx of nomads, who needed wide spaces for their flocks, and set fire to large tracts of forests which their goats prevented from growing again. The same factors are still at work. Much of the interior, however, must always have been steppe.

The only tree now to be seen in considerable numbers on the plateau is the pyramid poplar, which is often planted near settlements and is visible for long distances. It takes the place of the cypress which is characteristic of the lowlands of Asia Minor. Occasional elms and willows may be seen, with the tamarisk flourishing beneath their shade.

On the volcanic mountains arising out of the plain, such as Erjies Dag and Kara Dag, patches of trees and shrubs survive. Their lower slopes, up to a height of 5,000 ft., are generally clothed with the vegetation of the steppe. Above this line a zone of brushwood reaches to over 6,000 ft. Junipers and dwarf oaks predominate. Peculiar to almost all is a more or less stunted growth, rarely having a real tree-form, with dry branches and little foliage. The bush is seldom thick, and is interspersed with ground plants.

Of cultivated plants, the most important varieties grown on the central plateau are wheat, barley, oats, rye, millet, poppies, tobacco, vines, and fruit. Wheat and barley are grown in all the valleys, especially along the southern branch of the Anatolian railway; oats are confined to the moister regions of the north, and is replaced by barley further south; rye grows well in the dry, hilly districts around the plateau; millet is a favourite crop round Angora. Poppy cultivation—which yields a double product, opium and opium oil—is extensively carried out in the *Paroreios* valley and round Dineir and Konia. Tobacco is a government monopoly, but is widely grown in secret; the tobacco of the plateau is of coarse quality; vines and fruit grow in abundance along the lower slopes of the mountains, especially on Sultan Dag, Elma Dag, and the volcanic area around Kaisari.

The favourite garden vegetables are lettuces, onions, garlic, artichokes, and melons.

FAUNA

The brown bear, the wild cat, the wolf (which is a pest to the shepherds of the central plains, but does not hunt in packs), the jackal, and the fox, the hare and the sandmouse, the roe and the ibex, are the commonest animals on the central plateau. Among birds may be mentioned bustards and partridges, eagles, vultures, hawks, kites, and buzzards. Snakes are common on the mountains. The lakes and streams are known to be abundantly stocked with fish, but the varieties are little known. Pike and carp are caught in the lakes, and trout and salmon abound in the hill-streams. Fish is not a favourite article of food on the plateau.

The domestic animals are the horse, the ass, the mule, the camel, the ox, the buffalo, the sheep, the goat, the dog.

Anatolia is relatively poor in horses, but the animals are of good quality, and hardy workers. They are used for draught and riding, never for ploughing. The ass, which is found in all sizes, is the commonest beast of burden. Mules are rare on the plateau, where Moslem orthodoxy, which dislikes the crossing of animals, is a force to be reckoned with. The *Tulu* camel, a cross between the dromedary and the two-humped Bactrian camel, a strong heavy animal with one hump, is the variety most characteristic of the plateau. This animal stands the cold weather well. Agricultural work is done by oxen and buffaloes—the buffalo doing double the work and eating double the ration of the ox, and having a working-life three times as long (30 years). The Anatolian ox is a small, weak-boned animal, carrying little flesh. The cows are poor milkers. Goats produce milk, flesh, and wool—the best from the Angora variety, which is characteristic of the whole northern part of our area. These goats have a curly fluffy rich fleece which shines like silk, with hair 6 inches long or more. Sheep also give milk and supply the chief animal food of Anatolia: two varieties are found on

the plateau, distinguished as fat-tailed and ordinary. The dogs are large wolfish-looking animals, and very fierce. Poultry are kept everywhere.

POPULATION

According to the Turkish Official Estimate of 1914, the area described in this volume had a population of nearly 1,700,000, distributed as follows :

<i>Vilayet, Sanjak, or Kaza.</i>	<i>Moslems.</i>	<i>Greeks.</i>	<i>Armenians.</i>	<i>Other elements.</i>	<i>Totals.</i>
Merkez Kaza of Angora	69,066	3,327	11,246	1,026	84,665
Kaza of Karaly . .	31,546	48	11	8	31,613
Kaza of Yapan Ham- mam	34,352	193	138	—	34,683
Vilayet of Konia (omit- ting Buldur sanjak)	669,009	22,281	11,877	—	703,167
Sanjak of Eski Shehir (omitting Mikhaly- jyk)	117,211	2,613	8,695	400	128,919
Sanjak of Kaisari (omitting Develi and Bunyan Hamid) .	116,483	23,435	33,232	—	173,150
Sanjak of Afium Kara Hissar (omitting Chivril)	255,923	547	7,403	81	263,954
Sanjak of Nigde (omit- ting Ulu Kyshla) .	215,293	55,837	5,590	—	276,720
Totals	1,508,883	108,281	78,192	1,515	1,696,871

Moslems.—The Moslem population of this area is very mixed. In the mountainous regions of the west and south the Moslems are mainly derived from the old Anatolian population, with a fair admixture of settled and semi-nomadic Yürüks along the flanks of Sultan Dagh, and of Circassians and Yürüks in the Phrygian mountain region. On the plains and on the Galatian and Cappadocian Uplands, the main racial elements are Kurds and Turkmens, Turkmens along the Kyzyl Irmak and on the plains between Konia, Eregli, and the Tuz Göl, Kurds west of the Tuz Göl, and in the Sakaria basin to the north. Isolated villages of Tatars and of immigrant Circassians and Rumeliotcs occur everywhere ; Circassians and Rumeliotcs abound along the railway from Eski

Shehir to Eregli. A large number of European Moslems entered Asia Minor after the Balkan War, and many of them are settled on the plains of the interior.

Greeks.—Greeks are found in all the larger towns, and many Greek villages are found in the eastern part of our area, between Ak Serai and Kaisari. In the Vilayet of Konia, the largest Greek communities are those at Isparta (6,648), Konia (6,619), Egerdir (2,982), Ak Shehir (2,266), Uluborlu (1,278); elsewhere there are at most a few hundreds in any one town. The largest Greek communities in our area as a whole live in the Sanjaks of Nigde and Kaisari, where there are many villages in which a dialect derived directly from ancient Greek is spoken. Elsewhere the Greek spoken is the language taught in the schools, and re-introduced among a population many of whom had forgotten their mother tongue. All the Greeks and Armenians are bilingual, and speak Turkish as well as their own language. When writing Turkish they use the characters of their own language.

Armenians.—In the greater part of this area Armenians are found only in the towns; in every large town they have a quarter to themselves. In the Vilayet of Konia they are most numerous in Ak Shehir (4,890), Konia (3,435), Karaman (1,245), Isparta (1,119), and Eregli (888); elsewhere their members are insignificant. The detailed figures given above show large Armenian communities also in Angora and Kaisari, round both of which towns, and to the east of them, Armenians begin to be found in villages of their own. The above figures of course date before the massacres and deportations during the War.

For further information regarding these races, see Vol. I of this Handbook, Ch. IV and Appendix I.

TRADE AND INDUSTRY

Practically all the Moslems are engaged in agriculture and stock-raising, or in retail trade, and a few industries such as carpet-making, saddlery, and pottery in the towns. Skilled labour is scarce, and labour for industrial purposes is poor.

Even for the making of the railways, large gangs of Italian navvies were introduced. All technical and semi-skilled work on railways, mines, factories, &c., is done by Europeans, or by Greeks and Armenians. On the railways, Moslems are only employed as surface-men, porters, and booking-office clerks. The building trade is manned by Greeks, who also provide the doctors, lawyers, apothecaries, mechanics, carpenters, barbers, and inn-keepers. The Armenians of this area are mainly traders and artisans.

On the plains of the interior, cattle, sheep, goats, and camels are raised by nomad Kurds and Turkinens. The settled Turkish population, apart from the large towns, lives in villages along the flanks of the mountains. There is a considerable export of cereals, fruit, opium, wool, and hides. See further, Vol. I of this Handbook, Ch. VI.

COMMUNICATIONS

General

A glance at the Route map which accompanies Vol. II of this Handbook will show that the routes leading from the coastlands of the west and north-west on to the central plateau of Asia Minor are focussed at three points along the western edge of the plateau—Dineir, Aflum Kara Hissar, and Eski Shehir. The three railways leading on to the plateau pass through the same points, and emphasize the fact that they are the natural gateways of traffic on to the central plateau. The Route map attached to the present volume graphically reiterates the importance of the three western gateways, and adds three important gateways on the eastern side of our area, Angora, Kaisari, and Eregli.

Most of the traffic crossing the plateau of Asia Minor from east to west passes through one or more of these six points. The Anatolian Railway from Constantinople to Angora is the modern representative of an age-long route of traffic coming from Erzerum and Sivas, and passing through Angora to the valley of the Kara Su. A more direct branch of this route,

which lies outside the scope of the present volume, leads from Angora past Torbaly to the Gulf of Izmid. The railway from Afium Kara Hissar to Eregli similarly marks the course of a very old route, which led from Smyrna through the Hermos valley to Cilicia and Syria through the Cilician Gates, or through Kaisari and Malatia to Mesopotamia. An alternative route to this in the west was the road which led from Chai to Dineir, and down the Maeander valley to Smyrna. This road was surveyed as the route by which the Ottoman Railway should reach the central plateau, but here political considerations have interfered with convenience of traffic, and the Smyrna-Dineir railway was headed off from its natural avenue on to the plateau by the promoters of the railway to Baghdad.

Traffic from north to south across the plateau of Asia Minor is not important, and chiefly serves local needs. The great transcontinental routes lie east and west ; only where one or other of them turns north or south to cross the mountain rim is there any considerable stream of traffic in this direction.

The road system of the central plateau of Asia Minor has always felt the effects of external administrative and economic factors. In the lands surrounding the plateau, the course of the roads is laid down by nature. The alternation of lofty mountain and river valley has of necessity imposed certain lines for the passage of traffic, which temporary accidents of trade or government cannot alter. But on the level plains or gently undulating uplands of the plateau roads can run anywhere, and the history of the road system of the plateau has been a continuous process of adjustment to new conditions, a process which is still going on. In the Greek and Roman periods, trade was drawn to the Aegean ports, the agents of trade or of administration arrived at those ports, and the roads ran east and west. In the Byzantine period, the position of the Imperial capital on the Bosphorus attracted trade to the north-west, and we find the Byzantine roads swinging round in that direction. Constantinople has remained the capital of Asia Minor under

Turkish government, and the north-western tendency is still felt, although the development of Mediterranean commerce, and the importance of the port of Smyrna has exerted a strong attraction to the west. But the coming of the railways in comparatively recent times has already begun to introduce a new modification into the road-system. Roads now lead to the nearest railway station, and many of the old roads to the west, north-west, or north are falling into disuse. These considerations are of more than antiquarian interest ; they supply us with an *a priori* clue to the present condition of the roads in many districts. When traffic wanes, villages and khans along a road fall into decay, and supplies fail ; wells or fountains are choked up ; bridges are no longer kept in repair. On the other hand, a new railway station gradually calls into life new centres of population, supplies, means of transit, facilities for obtaining water.

On arriving at Eski Shehir, the Anatolian Railway, as it were, puts out two long arms around the central plains. The northern arm runs to Angora and beyond, the southern through Afium Kara Hissar and Ak Shehir to Konia, whence it is continued by the Baghdad Railway along the southern edge of the plain to the Cilician Gates. The portion of the Ottoman Railway running from Dineir to Egerdir also belongs to the plateau proper, running along the great corridor between the Phrygian mountains and Taurus. These railways are now the dominating factor in the traffic of central Anatolia, and they determine its road-system. In the arrangement of our routes, due prominence will be given to this consideration, and the roads will be linked up with the railways whenever possible. It will be both easy, and the only useful method, to treat the plains which lie within the railway embrace, and as much of the surrounding mountain fringe as comes under the influence of the railways, as a single system of inter-communication.

In the district lying between the two railways west of the Konia-Angora road, a somewhat artificial grouping of the routes has been adopted in the interest of clearness. In this

area there are no well-marked lines of communication, and routes are made to lead from south to north from stations on the southern railway to stations on the northern. The roads which cross these routes from east to west, as well as local roads joining points on one route to points on the next, are grouped in each case under the heading of ' Lateral Communication ', and numbered separately with the addition of a letter to the number of the main route (e. g. 8 A, 8 B, 8 C, &c.). Thus one or two important east-to-west routes in this area, such as the direct road from Afium Kara Hissar to Angora, will be found to be broken up into sections.

Railways

The plateau of Asia Minor can be reached by rail at four points, at Eski Shehir (from Constantinople) by the Anatolian Railway, at Afium Kara Hissar (from Smyrna) by the Smyrna Kassaba Railway, at Dineir (from Smyrna) by the Ottoman Railway, and at Eregli by the Baghdad Railway from Cilicia. From Eski Shehir branches of the Anatolian Railway lead to Angora, whence an extension to Sivas has already been begun (Route I) and to Konia (Route II). The branch to Konia throws off a short branch line to Kutahia, and is joined at Afium Kara Hissar by the Smyrna-Kassaba line. At Konia it links up with the Baghdad Railway (Route III), which runs through the area covered by this volume as far as Bulgurlu, east of Eregli (see Route 63). The Ottoman Railway (Route IV) runs in isolation from Dineir to Egerdir.

Routes radiating from Eski Shehir

A road (vol. II, Route 90) leads from Eski Shehir to Kutahia, whence it is continued by routes described in the same volume to Afium Kara Hissar. A more direct road between these points leads through Seidi Ghazi and Kümbet (Routes 12 and 16). An old road, formerly used by pilgrims to Mecca, led from Eski Shehir to the valley of Paroreios at Chai (Route 12), and the most direct route from Eski Shehir to Konia, still used (in spite of the railway) by through traffic,

leads past Azizie and Piribeyli on to the Afium Kara Hissar-Konia chaussée (Routes 11, 11 D, 10, and hence by a cross cut to 21). From Eski Shehir to the east, the traveller by road takes either branch of Route 14, or may go by Routes 11 and 15. From Sivri Hissar to Angora he may go along the railway via Beylik Köprü (Route 10) or by Kavunjy Köprü (Routes 10 and 10 N).

Routes radiating from Afium Kara Hissar

Afium Kara Hissar is joined to Dineir by the Sandykly road, described in vol. II. The road to the East follows the line of the railway, but takes a more sensible course along the higher ground at the side of the valley of Paroreios. This road (Route 21) goes to Konia, throwing off a more direct caravan road to Eregli (Route 64) at Serai Önü. The roads leading north-east from Afium Kara Hissar are hill-roads, and serve only local traffic. The best way towards the north-east leads through Bolavadyn and Azizie (Routes 16 a and 11). The roads to the north have been described under the preceding heading. A good road leads from Afium Kara Hissar to Chifut Kassaba, and thence to the Chai-Dineir road (Routes 33 and 31).

Routes radiating from Dineir

Dineir is in communication with Afium Kara Hissar (see preceding section), and with Egerdir by the railway (Route IV) and by Route 25. Over the pass north-east of Dineir goes the road to Chai (Route 31), which is the line of the ancient road from the Maeander valley to the east, and just beyond the same pass another beaten road branches off to the east, the road leading through the corridor south of the Sultan Dagħ to Konia (Route 22). This route is crossed by the road from Yalovach to Egerdir—a difficult road along the eastern shore of the Egerdir lake. From Egerdir a bridle-path leads over the mountains to Bey Shehir (Route 25). The principal communications of Egerdir are with the south, and are described in vol. III, part 3.

Routes radiating from Angora

To the north and east of the area described in this volume, Angora is in communication with Constantinople via Torbaly, with various points on the northern trunk road which runs through Boli and Tossia, and with Yozgad, Sivas, and the East by the chief trunk route of the northern side of the peninsula. The roads leading to Yozgad and to Kaisari cross the Kyzyl Irmak at Yakshy Khan (by a ford) and at Cheshnir Köprü (by a bridge) respectively (Routes 60 and 62). A lateral road connecting these routes runs along the valley of the Tabanlı Su (Route 61). A cart-road, which was chosen as the route of a projected railway, leads to Kaisari by the left bank of the Kyzyl Irmak (Route 59) and throws off a branch to Ak Serai (Routes 48 and 50, 51 and 52). The old post-road leads southwards, by two alternative branches, to Konia (Routes 5, 6, and 1). For routes to the west and south-west see under *Eski Shehir* and *Afium Kara Hissar* above.

Routes radiating from Kaisari

Kaisari stands at the junction of several highly important roads, which are described in vol. IV. In the area to the west a much-used trunk road leads to Eregli, throwing off a branch to the Cilician Gates and the South at Nigde (Route 63, and vol. IV, part 2, Routes 29, 28, 30). From Bor, on this route, a caravan road leads across the steppe to Serai Önü (Route 57). The direct road from Kaisari to Konia, via Ak Serai, carries a fair amount of traffic (Routes 56 and 43). The road to Nev Shehir, Koch Hissar, and Angora (Route 59) is chiefly used by local traffic between the places along it.

Routes radiating from Eregli

The communications between Eregli and the south are described in vol. IV, part 2, and vol. III, part 3. Over the Lycaonian steppe it sends roads to Konia via Karaman (Route 44) or (more directly) via Karapunar (Route 45), and to Ak Serai (Route 55). Eregli derives its importance as a

road centre from its position at the point where the road from Mesopotamia via Malatia joins the road from Syria and Cilicia to cross the plateau towards the west.

Routes radiating from Konia

Konia lies on only one trunk-road of first-rate importance (Routes 21 and 44, and Route III), but it is the centre of an unusual number of secondary roads, some of them of more than local importance. Routes 1 and 5 or 6 lead to Angora or to the Salt Lake; Route 43 is the most direct line to Kaisari, via Ak Serai; Route 42 goes due east, and cuts off a long detour on the chaussée to Kaisari; Routes 45 and 64 give the most direct access to Eregli and the Cilician Gates, and the traveller has the choice of three routes (Route III, 44, or 46) to Karaman, whence he can cross the Taurus range by the most direct pass, over an engineered road (vol. III, part 3, Routes 37 and 30). Routes 36, 37, and 38, leading into the hill-country to the south of the Konia plain, serve specific local needs, and the same is true of the cross roads connecting these routes with the railway (Routes 39 and 40). But the succeeding roads as we circle to the west (Routes 35 and 34) are alternative ways of accomplishing the first stage on the journey to Adalia, on the south coast (see vol. III, part 3). The road from Konia to Dineir by the pass south of Sultan Dagħ (Route 22) is hardly used for through traffic, but, with its various branches, is an important road for local needs. The most direct access to Ak Shehir is by Route 23 which crosses a low pass under the south-eastern end of Sultan Dagħ, and is passable for carts. Route 24 is a bridle-path to Ilghin and Kadyñ Khan.

Passes over the Phrygian Mountains

Over the ridges which extend from Eski Shehir to north of Chai the principal roads are the Kutahia-Seidi Shehir road (Route 15), the tourist road from Afum Kara Hissar to Kumbet (Route 16), the more difficult alternative road between the two places via Isje Kara Hissar (Route 20), the pass from

Sürmene to Bayat, passable by wheels with difficulty (Route 16 B), and finally the easy chaussée over the pass north of Chai going to Azizie and throwing off a cart-road to Bayat and Seidi Ghazi (Routes 11 and 12). Further to the east, a poor road, passable by wheels, crosses Emir Dagh via Karapunar (Route 11 c) and an easy road leads from Ak Shehir to Piri-beyli (Route 10). Route 10 d, north of Chaushjy Köi, crosses the low hills in this region by an easy pass.

Passes over the Sultan Dagh, with its south-western and south-eastern extensions

Several roads cross the ridges which accompany Route 31 on the south-east, but none is described in detail in this volume. The only road known to have been crossed by a wheeled vehicle is the road from Aresli to Gundanlı, mentioned on Routes 31 and 22. Further to the north a bridle-path crosses Sultan Dagh, at a high altitude, from Akarym to Yalovach, and there are doubtless others over the lower south-western extension of the range.

As we proceed to the south-east, Sultan Dagh is crossed by a much frequented bridle-path, along which the road is kept in repair, between Ak Shehir and Yalovach (Route 27). Route 26, the next in order, is a chaussée constructed by the Anatolian Railway Company to bring the trade of Yalovach and Karaghach to the station of Ak Shehir. Between Routes 26 and 27 a path is reported to lead directly from Ak Shehir to Gemen, south-east of Yalovach, but no description of it is available. Similar paths no doubt lead over the range between Route 26 and Route 28, which is a bridle path leading from Doghan Hissar to Karaghach. The road from Konia to Ak Shehir (Route 23) and the bridle path to Kunderaz (Route 24) are the remaining roads known to cross the ridge which runs westwards from Ladik.

Passes over the Boz Dagh

The Boz Dagh, and the col connecting it with the mountain range on the west is practicable for wheeled traffic over the

following passes, and, so far as is known, by no others. All those passes have actually been crossed by a phaeton with springs.

We enumerate the passes from west to east.

- I. The chaussée from Konia to Dokuz Devrent Khan, hence by cart road to Sisma. Mule-track from Sisma to Ladik. (See Route 21, mile 14½.)
- II. The chaussée Konia to Ladik. (Route 21.)
- III. A cart road striking r. from the chaussée opposite Baghregurt Yaila, and going via Meidan village to Meidan station. (Route 2.)
- IV. Haji Velinin Khan to Tutup (very bad road). (Route 3.)
- V. Tilki Khan to Tutup (excellent road). (Route 1.)
- VI. Egribayat via Mernek to Kochash or Zengijek (easy pass). (Route 4.)
- VII. Ak Bash Khan to Toprakly Yaila (easy pass). (Route 43.)
- VIII. The Yaly Bayat pass (difficult). (Route 41.)
- IX. The pass south of Genne (easy). (Route 42.)
- X. The pass from Zengijek via Zengijek Kale to Suverek. (Route 64.)

These passes are described in detail in connexion with the routes which cross them.

The roads joining the Eski Shehir-Angora and Eski Shehir-Konia Railways

As has been explained already, the arrangement of routes in this area is artificial, and has been adopted for clearness. The roads in this area along which much traffic actually passes are the Konia-Angora road (Routes 1, 5, 6); the Ak Shehir-Sivri Hissar and Ak Shehir-Eski Shehir roads (Routes 10, 11 D, 11), and the roads leading north from Chai to Eski Shehir, Sivri Hissar, and Angora (Routes 12, 11, 13, 10, 10 N, 10 I, 10 J, 8, and 9). Roads leading westwards from the Tuz Göl (Routes 8 A, 8 B, 10 C, &c.) are used by the salt caravans. The remaining routes are of local importance, as leading to a railway station, or from village to village.

The Drovers' Road

A road of some interest, from its bearing on the question of fodder and water-supply, is the old drovers' road across the heart of the Lycaonian steppe. This road, which was described by a shepherd driving a huge flock of sheep along it from Kyrshahir to Constantinople in 1883, comprised the following stages : Ak Serai ; thence Ajem, 5 hrs. ; Sultan Khan, 10 hrs. ; Eskil, 14 hrs. ; Obruk, 18 hrs. ; Suverek, 22 hrs. ; Gozlu, 28 hrs. ; Kolu Kissa, 30 hrs. ; Kara Göz, 36 hrs. ; Ak Göl, 38½ hrs. ; Cheltik, 41½ hrs. ; thence by Bey Bazar and Torbaly (see Route 10 E).

General character of roads on the plateau

Even the trunk roads of the country vary much in construction and the condition in which they are maintained. The same road often shows great differences within a comparatively short distance.

As a rule the trunk roads are chaussées of from 15 to 25 ft. in width, tolerably well constructed, but almost always deficient in foundation. Much attention has been given to gradient, and this, on the whole, is remarkably easy considering the mountainous nature of the country. Culverts for flood water are general on some lengths of road, but absent on others ; the substitute adopted is a dip and rise across the whole width of the roadway.

Surface varies so much that it is impossible to generalize, except that the designation of a road as a chaussée implies metalling or paving in some form. Sometimes broken stone is used, sometimes merely a dressing of loose shingle ; sometimes long stretches of road are paved with large loose rounded stones closely set upon the earth. Naked rock also appears frequently as a road surface.

Few roads maintain a good condition in extremes of weather ; in winter, and during heavy rain, they are deep in mud, in the heat of summer deep in dust. In the neighbourhood of towns roads are, as a rule, better than on intermediate

stretches. Kilometre stones are provided along some chaussées. In some parts of the country roads are maintained by forced labour.

Unmetalled roads receive little attention either in making or in upkeep. They are usually no more than convenient routes along which obstacles are not so great as to prevent wheeled traffic. Upon such a route vehicles choose their own course ; the road has no definite limits in width, and sometimes expands to several hundred yards.

Caravan- and horse-tracks receive no attention at all ; they are routes along which, on account of narrowness, gradients, or obstructions, wheeled traffic is unable to pass.

Streams and rivers crossed by trunk roads and chaussées are generally bridged by stone or wooden bridges, the material depending a good deal on the presence or absence of forest within reasonable distance. Stone bridges are usually good and sufficient ; wooden bridges poor, and liable to injury by flood.

Bridges are also provided along many cart-roads and caravan-tracks on which traffic is considerable and streams difficult to ford. Wooden bridges frequently remain broken and impassable by any traffic for long periods ; repairs depend on the enterprise of local authorities, and the importance of the traffic a bridge serves. Few wooden bridges are capable of supporting a load of more than $11\frac{1}{2}$ tons on two wheels. Fords often exist beside bridges, and are frequently used when the streams are low, though the bridge may be intact.

Reckoning of distance and rate of travel

Distance is measured by hours. Many of the chaussées are provided with kilometre stones, but to these the natives pay no attention and always give the distance from place to place in hours.

An hour's distance is not accurately fixed, and must obviously differ with the character of the road and the mode of transit. The nearest approach to an accurate standard is the official posting hour by which the price of horse-hire from stage to

stage was formerly reckoned. Along the post-roads, even where they have been superseded by railways, the distance is usually given in official posting hours. The latter work out at an average of $3\frac{1}{2}$ miles over level country, but are considerably shorter in the mountain regions. The posting times are always shorter than those taken by troops on the march.

The distance covered within an hour varies much, being dependent on such factors as the condition of the road, amount of load, variety of gradient. 'Hours' of a specified kind, such as 'araba hours', 'pack-horse hours', 'caravan hours', &c., are also in common use.

Away from the post-road the Turkish indifference to accuracy in numbers makes native statements vague and misleading: 'half an hour' means 'over the way'; 'one hour' means from two to five miles; 'two hours' may mean anything from five to ten miles. As a rule, the natives know the time taken to the nearest market town or governmental centre accurately enough, but are very vague as regards distances to places with which they are less familiar. A question regarding the distance to a place often divides a village group into two parties—say a three-hour party and a five-hour party.

'An hour' usually means from 3 to $3\frac{1}{2}$ miles. In mapping, $3\frac{1}{2}$ miles per hour is a satisfactory allowance in level country, or $2\frac{1}{2}$ miles in mountainous country.

The ordinary rate of travel in Turkey is that of a caravan of loaded pack animals, and is usually a little under 3 miles an hour. Supposing the stage to be an 'eight hours' one, allow about ten hours' time for the actual march.

Upon all routes, on some of course more than upon others, travelling is liable to interruption and delay by flood, snow, frost, heavy rain, destroyed roads, or broken bridges. In winter deep snow may block the high passes, particularly in eastern Asia Minor, for weeks together, and even close lower roads for a time. Traffic then ceases, or is compelled to make détours involving great distances.

After heavy rain large parts of the Lycaonian steppe become

waterlogged or deeply covered with mud, and wheeled traffic over them is impossible.

TRANSPORT

The vehicles of Asia Minor are limited to two chief varieties : arabas and ox or buffalo carts. All four-wheeled vehicles are called arabas. Two sorts, however, exist—heavy and light ; both drawn by two horses as a general rule, though sometimes by three. Light arabas are mounted on springs (*yaili araba*), and furnished with a hood, and are the passenger vehicles of better-to-do travellers. In fine weather on good roads these conveyances can average 40 miles a day for long distances ; 25 or 30 miles is a more usual average on ordinary roads. The heavy springless araba (*yuk araba*) is a slow cumbersome wagon, often of the most primitive construction, used for goods and by the poorer sort of passenger. In some districts a better kind of goods wagon, drawn by three horses, is found. On chaussées it can average three miles an hour with a load of from 15 cwt. to a ton.

The universal vehicle, however, of the country districts is the ox or buffalo cart, formed of two solid wooden wheels fastened to a wooden axle supporting a rough frame. Wheels and axle revolve together. Such carts carry from 12 cwt. to a ton, depending on the nature of the road, and can traverse almost any track. They have a pace of about 2 miles an hour for 8–10 hours a day. In the Cilician plain a very much larger kind of ox-cart, with high, spoked wheels, is used for conveying cotton.

When a road is described as ‘ fit for wheels ’ in the present volume, it is to be understood that it can be traversed in a four-wheeled araba.

Large quantities of goods are transported by camel-caravans, pack-horses, mules, and asses. Caravans frequently ply between points a great distance apart, and are essentially a long-distance means of conveyance. Their daily journey is 15–20 miles. A camel’s load varies between $2\frac{1}{2}$ and $4\frac{1}{2}$ cwt. Pack-horse, mule, and ass conveyance is, in general, used for

short distances, and averages 18–25 miles a day. Caravan and pack-animal traffic appear on every kind of road.

Owing to a variety of causes, some economic, others due to prejudice, conveyance by road is carried on in many districts side by side with a railway service.

The quantity of rolling-stock available on the Anatolian and Baghdad railways is unknown.

Before the War, engines of over 15 tons axle with six-wheeled tender (maker : Borsig, Berlin) were used. For first and second-class passengers, coaches similar to those in use on the German railways were available. For third-class, there were four-wheeled coaches with six compartments, holding 50 men.

There is no information regarding the number of the various classes of wagon available in this area.

Arabas with springs exist in considerable numbers in all the larger towns, and the springless variety are common everywhere. Riding-horses are much scarcer than formerly. There are practically no mules. There are many herds of camels on the Lycaonian plain and in the Haimane.

SUPPLIES

Food.—Large quantities of cereals (especially wheat and barley) and fruit are obtainable along the Eski Shehir–Eregli railway. Vegetables are grown in small quantities.

Sheep and goats are abundant on the plains, and cattle are fairly plentiful.

Fodder.—There is little hay, and what exists is of poor quality. Horses are fed on chopped straw and barley (*arpa saman*). In spring pasture is plentiful everywhere ; in summer it rapidly dries up.

Fuel.—The plains are treeless, and dung is the universal fuel. In the mountain districts, wood and scrub are burned.

Water.—Good water is plentiful in the mountains. On the plains of the interior, water is almost everywhere got from wells, which are often very deep. On the Lycaonian steppe the water is generally brackish. In several districts snow is

collected in cisterns, and provides the water-supply in summer. In the towns and larger villages, great importance is attached to a good water-supply, and wherever spring water is available it is distributed to numerous fountains.

TELEGRAPH SYSTEM

Telegraph wires accompany all the railways. Trunk lines enter our area from the north-west at Eski Shehir and at Angora.

Along the northern edge of our area wires run from Eski Shehir to Seidi Ghazi, and from Bey Bazar through Mikhalyjyk to Sary Kõi on the Anatolian Railway and to Sivri Hissar. From Angora lines run to Yapan Hammam and Karaly, the administrative centres of the Haimane.

From the trunk line which runs from Eski Shehir to Eregli, following the direction of the railway, there are wires, in the area covered by this volume, to Bolavadyn and Azizie, from Ak Shehir through Yalovach to Egerdir, Isparta (which is also connected with Denizli and Smyrna) and Uluborlu. From Yalovach a wire goes on to Karaghach. Lines run from Konia to Sille and to Bey Shehir, Seidishehir, and Siristat, whence an extension to Ermenek was contemplated, and may have been executed. From Eregli a wire goes to Karapunar. From Ulu Kyshla a wire runs to Bor, Nigde, and Nev Shehir, where it meets a line running from Kaisari (and ultimately Yozgad) to Inje Su, Ürgüb (branch to Avanos), Nev Shehir (branch to Arebsun), Ak Serai, and Koch Hissar.

In this area Angora, Eski Shehir, and Konia are 'international' stations, where telegrams are accepted in European languages. At Seidi Ghazi, Sary Kõi, Sivri Hissar, Yapan Hammam, Karaly, Kutahia, Afium Kara Hissar, Bolavadyn, Azizie, Ishakly, Ak Shehir, Yalovach, Karaghach, Egerdir, Isparta, Ulu Borlu, Ilghin, Kadyan Khan, Sille, Bey Shehir, Seidishehir, Siristat, Karaman, Eregli, Karapunar, Ulu Kyshla and all the stations mentioned above after Ulu Kyshla, telegrams in Turkish are accepted. There are thus telegraph offices in the chief town of every kaza, and in a small number of *mudirliks*.

ITINERARIES

RAILWAYS

SUMMARY

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GENERAL

THE railways serving the area described in this Handbook are: 1. The Anatolian Railway, sections Eski Shehir to Angora and Eski Shehir to Konia; 2. The Baghdad Railway from Konia to Eregli; 3. The Ottoman Railway from Dineir to Egerdir.

During the war the Eski Shehir to Angora Railway has been extended at least as far as Asy Yozgad, 24 miles east of Angora. This extension will ultimately carry the line to Sivas.

THE ANATOLIAN RAILWAY

From Eski Shehir the Anatolian Railway throws two arms around the northern and southern edges of the great plains in the middle of the central plateau, the northerly arm going to Angora and ultimately to Sivas, the southerly to Konia, whence it is continued by the Baghdad Railway.

Eski Shehir-Angora.—Traffic between Eski Shehir and Angora naturally follows the Porsuk valley eastwards from Eski Shehir. This valley, being nearly level, and generally wide and open, offers no difficulties to the railway engineer.

The line follows the Porsuk to its junction with the Sakaria. A stream flows down from Angora to join the Sakaria about 20 miles farther north, but the lower part of its valley is unsuitable for carrying a railway, and the line finds an easier route by turning south up the Sakaria valley for 6 miles, whence it turns eastwards up the valley of a small tributary, crosses a col of moderate height, joins the valley of the Angora river, and follows it to Angora.

Eski Shehir-Konia.—There is a side branch of the Constantinople-Eski Shehir road, leading from the upper end of the Kara Su valley direct south-west to Kutahia and Afium Kara Hissar without touching Eski Shehir, and the Anatolian Railway turns back south-west from Eski Shehir to follow this route. It passes near Kutahia, to which it throws out a short branch line, and then follows the natural route to Afium Kara Hissar and the valley of Phrygia Paroreios. This circuitous route is preferable commercially to the direct route over the Phrygian Mountains by Seidi Ghazi and Bayat, as it leads through a better cultivated region, and touches the chief towns.

From Eski Shehir the line mounts the winding valley of the Porsuk to Köche Kesik. It then leaves the river valley to avoid a series of gorges, and climbs over hilly plateaux dominating the river on the east as far as Alayund, where it rejoins the river. In this hilly region steep gradients necessitate many *ouvrages d'art*. Beyond Alayund the line, after a *détour*, joins a tributary of the Porsuk, and passes from it into the valley of an affluent of the Dolai Chai, which it crosses before reaching Afium Kara Hissar.

Afium Kara Hissar is the terminus of the Smyrna-Kassaba Railway; the two stations, $1\frac{1}{2}$ mile apart, are connected by rail. There is a good road to Dineir on the Smyrna-Aidin Railway, 70 miles distant. Afium Kara Hissar is destined to be one of the most important ganglia of railway communication in Asia Minor.

From Afium Kara Hissar to Konia there are no important obstacles. Afium Kara Hissar stands 3,307 ft. above sea-level,

Konia 3,373 ft. ; and except when crossing the ridge between Ak Shehir and Ilghin and the col of the Boz Dagh, south of Meidan, the line runs over level ground. It first enters the flat valley of the Akar Chai, bounded north and south by hills of no great height above the level of the valley. A little west of Chai the north-west buttress of the Sultan Dagh towers up on the south, and this range, an imposing ridge of 8,000 ft., runs south-east for a long distance, followed closely by the railway. The western portion of the Sultan Dagh falls sheer down to the plain without outliers, but east of Ak Shehir it throws out a series of foothills, and this conformation is continued by the ranges which prolong the Sultan Dagh to the south-east. East of Ak Shehir the line turns away from the mountains to avoid the foothills, crossing a marked rise before reaching Ilghin. At Meidan it turns south to cross the Boz Dagh by a difficult pass ; the easiest pass over the Boz Dagh lies a few miles farther east between Tutup and Tilki Khan. The line zigzags up the mountain side to an altitude of 3,488 ft., 9 kilometres from Meidan, and then descends into a level plain and reaches Konia. Here it joins the Baghdad Railway.

The region between Afium Kara Hissar and Konia is not drained by streams flowing to the sea ; it is part of a vast inland drainage area, in which all the moisture collects in lakes and marshes and escapes by evaporation. The water-level of the lakes and marshes naturally varies greatly at different seasons, and the railway engineers, in choosing a route through the low-lying parts of the plateau, have paid too little attention to variations in the water-level. The result is continual trouble for the maintenance service in the wet season.

The river of Afium Kara Hissar, the Akar Chai, flows into the Eber Göl east of Chai, issues again to the east, and winds slowly to the lake of Ak Shehir, which is fed also by streams flowing down from the Sultan Dagh on the south-west. These lakes are subject to considerable variations of level ; they may disappear entirely, and form extensive marshes ; they may

rise, and form a continuous sheet of water which extends far up the Akar Chai to the neighbourhood of Bolavadyr.

North of Konia, too, the line runs through a belt of low-lying land, in which water collects and interferes with the service of trains in the wet season.

We are without data which would enable us to estimate the rainfall to be expected in this neighbourhood at different seasons, and its effect on the circulation of railway traffic. Going from the coast to the interior of Asia Minor, the rainfall as a rule decreases. The following figures give the approximate annual rainfall at selected points : Skutari, 741 mm. ; Geive, 736 mm. ; Bilejik, 360 mm. ; Eski Shehir, 273 mm. ; Angora, 233 mm. ; Afium Kara Hissar, 362 mm. ; Konia, 181 mm. In the neighbourhood of the mountains (and the Eski Shehir-Konia line is dominated by mountain ranges throughout its course) rain falls all the year round, but especially in spring ; 75 mm. in May at Afium Kara Hissar ; 28 mm. in May at Konia.

THE BAGHDAD RAILWAY

From Konia to Eregli the Baghdad Railway runs over a level plain, with practically no gradient. It crosses a slight rise between Haji Baba Dagh and Kara Dagh, west of Karaman, and another between the plains of Karaman and Eregli.

THE OTTOMAN RAILWAY

The extension of the Ottoman Railway from Dineir to Egerdir was opened to traffic in 1912. It crosses the pass north-east of Dineir, descends to Kechiborlu, and then crosses the level plain north of Isparta, finally mounting over a high col west of Egerdir.

ANATOLIAN RAILWAY

ROUTE I

SECTION ESKI SHEHIR—ANGORA

[The laying down of this line on the maps is inaccurate in detail.]

Single line, normal gauge. Maximum gradients 1/100 between Beylik Köprü and Polatly and 1/80 just after Polatly. Mean downward gradient between Eski Shehir and Beylik Köprü 1/1350. Time of journey 9 hours, including stops.

km.

0

From **Eski Shehir** (2,598 ft.) the line goes E. along the flat Porsuk valley (see Routes 14, 10). The valley is largely uncultivated. The line goes at first along the l. bank of the Porsuk Su, crossing the stream at km. 10. To the N. lies the Boz Dagħ (4,000 to 5,000 ft.). After the line crosses the Porsuk Su, the hills on either side close in, but open out again before the line reaches the station of Ak Punar.

22

Ak Punar station (2,543 ft.). The village lies SE. of the station (see Route 14, m. 12½). The line now runs between the foothills of Ojak Dagħ (4,700 ft.) on the S. and the Porsuk Su on the N.

38

Alpy Kōi station (2,505 ft.). Water tank. The village lies on the N. side of the river, which is spanned by a bridge (see Route 14 *ad fin.*). The line continues E., crosses the Porsuk Su, winds round the N. side of a low ridge called Uzun Burun, and runs over the plain.

60

Beylik Akhyr station (2,474 ft.). The village lies to the S. on the N. bank of the river. The line continues along the N. bank, crosses the river for the

- km. | third time, and passes close to the foothills of Kartal Dagħ (5,400 ft.).
- 91 | **Sary Kōi** station (2,411 ft.). Water tank. A chaussée goes N. to Kuyujak. The valley now narrows to a mere pass, turning NE. and then SW. The line follows the r. bank of the stream.
- 118 | **Bicher** station (2,303 ft.). A chaussée to Sivri Hissar was projected about 1900, but there is no information regarding its completion. The valley now widens, and the line turns S. to round a bend on the river, and turns E. through the valley.
- 139 | **Saghzylyar** station (2,257 ft.). A cart road goes to Sivri Hissar (Route 10). At 4 km. E. of Saghzylyar near the junction of the Porsuk and the Sakaria, the line turns S. and follows the l. bank of the Sakaria.
- 152 | **Beylik Köprü** station (2,257 ft.). Water tank. From Beylik Köprü a road goes to Sivri Hissar (Route 10). The railway crosses the Sakaria by a bridge 160 ft. long, and turns E. up the valley of the Gümüş Su (gradient 1/100).
- 171 | **Polatly** station (2,871 ft.). Water tank and good spring. A chaussée goes E. to Yapan Hammam, the administrative centre of the Haimane. The line rises to 3,032 ft. at km. 175 (gradient 1/80), and then descends into the valley of the Zilar Su, which it follows in a NE. direction till it joins the valley of the Engüri Su.
- 205 | **Mally Kōi** station (2,411 ft.). Water tank. A road goes direct to Angora. The line now mounts the l. side of the narrow valley of the Engüri Su, going at first NNE., then turning E. near Istanos.
- 235 | **Sinjan Kōi** station (2,575 ft.). Water tank. The line then goes E. along the S. bank of the Engüri Su.
- 261 | **Angora** station (2,782 ft.). Water tank.

[From Angora to the Kyzyl Irmak, the following are reported to be the stations on the extension :

Angora, Kayabaghche (12 km.), Lala Khan (27 km.), Asy Yozgad (44 km.), Kylyjlar (60 km.), Kalejik (69.6 km.), Yakshy Khan (84.3 km.). In February 1919 only the station at Kayabaghche had been built.]

ROUTE II

SECTION ESKI SHEHIR—KONIA

Single line, normal gauge, maximum levels after leaving Düver and Meidan. Time of journey 15 hours, including stops. Restaurant at Afium Kara Hissar.

km.	
0	Eski Shehir station (313.4 km. from Haidar Pasha), alt. 791 m.; water tank; repair shops and roofed shed for cereals. Many loop-lines. Junction of line to Angora. The station covers a considerable extent of ground, which is marshy and unhealthy, the personnel suffering much from fever. There is an engine shed for 24 locomotives, entered by rails crossing a turn-table of 15.5 m. diameter.
	Line ascends the winding Porsuk valley, with a range of hills on the l.
7	Single span steel bridge 30 m. long over the Porsuk Chai.
21	Similar bridge over same river.
23.4	Köche Kesik station, alt. 830 m. The village lies to r. under chalk cliffs.
27.4	Bridge over Porsuk Chai.
	Line leaves the Porsuk valley and turns abruptly to enter the Ak Kaya defile. In this defile there are within a sector of 4 km. 8 steel bridges of 18 m. span and 4 of 10 m. span, 3 tunnels of 36 m., 50 m., and 60 m. respectively, and numerous minor works of span varying from 0.60 m. to 5 m. The original con-

km.

struction work was badly done and required constant mending. Some of the larger bridges may have been rebuilt.

43.4 Line enters plain of Sabunjy Punar.

45.2 **Sabunjy Punar** station, alt. 955 m. Water tank.

58 Line rises to a col, alt. 1,030 m.; siding at the summit. Then a rapid descent for 9 km. with gradient of 10 to 19 in 1,000.

66.9 **Alayund** station, alt. 936 m.; water tank.

Branch line to Kutahia, 10 km. distant. This branch crosses the Porsuk Chai by a solid bridge of 30 m. with 2 spans of 15 m. **Kutahia** station, alt. 933.20 m. (960 m., according to another authority); water tank.

Line now follows the valley of Beli Kavak, through barren hills and slate formations.

82.9 Enter the Chükürler defile; cuttings and bankings to divert the water.

Steel bridge of 10 m. span over a watercourse, generally blocked by rubble carried down by the stream.

86.5 **Chükürler** station, alt. 1,028 m.; water tank; large shed for grain.

90.6 Line enters defile of Aghalar, 3 km. long. In the defile there are 7 semicircular bridges of 5 m., a tunnel of 50 m., and a series of less important works.

Leaving the defile the line skirts on the l. a wide rolling plain, with a village, Ismiji. On the r. is Elmaly Dag.

113.1 **Düver** station, alt. 1,125 m.; shed for grain. Düver village is close by, on the l.

Line crosses a marsh, which is apt to flood and cut the line in rainy weather. It then rises to its highest elevation in this region (alt. 1,127 m.), beyond which it descends rapidly over a plain where the ground is liable to settle.

km.	
127.9	İkhsanie station, alt. 1,095 m. ; shed. Line enters the plain of Ak Ören, and descends the valley of a small stream.
141.5	Hamman siding, alt. 1,048 m. Close to natural hot baths and a Muhajir village.
145	Gazly Göl Hamman station, alt. 1,041 m. ; water tank. Line enters the wide marshy plain of Afium Kara Hissar, and crosses a solidly built steel bridge of 30 m. with 3 spans of 10 m.
161.2	Afium Kara Hissar station, alt. 1,008 m. ; water tank. Shed, 80 m. by 12 m., with a platform. Also a platform for entraining and detraining guns. An engine shed for 8 locomotives, entered by rails passing over a turntable of 13.50 m. diameter. Quarters for personnel, a workshop for repairing rolling-stock, a coal dépôt, and coaling platform. Hotel-restaurant. Junction by rail with Smyrna-Kassaba Railway station $1\frac{1}{2}$ mile to W. The junction is at km. 160.5. Good chaussée 36 ft. wide connects station with town. The line goes along the chaussée (Route 21), crossing it twice (at kmm. 170, 176).
180.7	Büyük Chobanlar station, alt. 992 m. Shed of 240 sq. m. The village lies over the river, to the N. The line and the chaussée now deviate, the latter keeping close to the foothills on the S. side of the valley, and the line going along the S. side of the river, through marshy ground. Here the embankment requires much care in the wet season, and parts of the line are sometimes under water.
186.1	Bridge of 20 m. span.
191.2	Bridge of 20 m. span.
197	Bridge of 10 m. span.
198.2	Bridge of 20 m. span.
207.5	Chai station, alt. 977 m. ; water tank. A fine spring in the station. Chai town lies 3 km. S. of the station,

km.

and is joined to Bolavadyn by a fine chaussée, 14 km. long, which crosses the railway at a level crossing just E. of the station (see Route 11).

Line continues through marshy land, necessitating the construction of several steel bridges of from 2 to 10 m. span.

212 Steel bridge of 10 m. span.

233·6 **Ishakly** station, alt. 975 m. The village lies a little higher, 2 miles to S.

Line now keeps closer to the foot of Sultan Dagħ, and crosses several small streams.

246·9 **Yassian** station, alt. 966 m., near the SW. corner of Ak Shehir lake. Marshy ground.

259·2 **Ak Shehir** station, alt. 998 m. ; water tank ; shed of 500 sq. m. A good chaussée 10 m. wide connects station with town, which lies close under Sultan Dagħ, 2 km. to S.

Line turns away from Sultan Dagħ, goes E. over a flat fertile plain, and mounts a ridge.

277·6 **Azary Kõi** station, alt. 1,023 m. Shed of 250 sq. m.

Line rises over bare hills for 9 km., attains a height of 1,089 m., and descends into valley of the Kesik Köprü Chai.

299·4 **Chaushjy Kõi** station, alt. 1,043 m. ; water tank. Shed of 250 sq. m.

Line passes near Chaushjy Kõi, where it turns sharply to the r., and follows the edge of Chaushjy Lake from km. 305 to km. 313, finally entering the fertile plain of Ilghin.

316·9 **Ilghin** station, alt. 1,030 m. ; water tank ; shed of 500 sq. m. A good road joins station to town, 2 km. to S. District very malarious.

Line crosses the chaussée twice, passes through a narrow defile just before Kara Kõi (km. 333), and goes over bare open country to Kadyn Khan. On

- km. | this sector there are two perfectly straight lengths of 5,515 and 5,224 m. respectively. Little constructional work. Over a massif between km. 327 and 340.
- 343·5 | **Kadyn Khan** station, alt. 1,031 m. From here to Serai Önü there are few gradients, and a straight length of 5,624 m.
- 367·5 | **Serai Önü** station, alt. 1,068 m.; water tank; a khan and large storage sheds for grain beside the station. The village lies 2 km. to the N.
Line goes E. over level plain, passing several small villages, rounds a hill, and turns SE.
- 384·3 | **Meidan** station, alt. 1,063 m., in a valley dominated by hills to S. and W.
Line now zigzags up the flank of Boz Dagħ, reaches its highest point (alt. 1,133 m.) at km. 394 (where there is a siding), winds considerably as far as km. 403, and descends into plain of Konia.
- 411·3 | **Punar Bashy** station, alt. 1,007 m.; water tank. Here trains are broken up to climb the Boz Dagħ in sections.
Line passes over a plain subject to inundations in the wet season.
- 433·7 | **Konia** station, alt. 1,028 m.; water tank; quarters for personnel; turntable of 13·5 m. diameter; shed for 4 locomotives; coaling platform; shed covering 1,250 sq. m.; repair workshops; chaussée 12 m. wide and horse tramway to town, 2 km. distant. Hotel at station.

There are two sidings on this section, one at km. 58, one at km. 394, to allow the dividing of trains at Alayund and Punar Bashy respectively. The engines cannot draw more than 240 tons on slopes exceeding 10 in 1,000. The time lost at these points is 1 hr. at km. 58, and 1½ hr. at km. 394.

WATERING-STATIONS ON ANATOLIAN RAILWAY

SECTIONS ESKI SHEHIR—ANGORA AND ESKI SHEHIR—
KONIA

Station.	Diameter of well.	Water-supply in 24 hours.	
		Ordinarily.	In dry season.
	Metres.	Cubic metres.	Cubic metres.
Eski Shehir	4	100	80
Alpy Kõi	2	30	20
Sary Kõi	2	30	20
Bicher	2	20	20
Beylik Köprü	2	40	25
Polatly	2	40	20
Mally Kõi	2	35-50	25
Sinjan Kõi	2	35-50	25
Angora	2	70	40
Sabunly Punar	2	50	30
Alayund	2	ample	ample
Chükürler	2	—	20
Düver	2	—	30
Gazly Göl Hammam	2	ample	ample
Afium Kara Hissar	3	100	40
Chai	2	40	20
Ishakly	2	40	20
Ak Shehir	2	50	30
Chaushly Kõi	2	40	15
Ilghin	4	60	35-40
Serai Önü	2	45-50	40-45
Punar Bashy	2	40	20
Konia	2	100	50

ROUTE III

BAGHDAD RAILWAY

SECTION KONIA—EREGLI

Single line. Normal gauge. Time from Konia to Eregli
5 hrs. 30 min.

km.

0

Konia station (see above).

Line runs S. over open flat plain.

- km.
- 10 50 ft. plate girder bridge over shallow water.
- 20 4 **Kashyn Khan** station, alt. 1,007 m. Loop and siding.
- 30·2 50 ft. lattice-girder bridge over artificial irrigation channel.
- 44·2 **Chumra** station, alt. 1,005 m. Loop and siding. Near the station are the offices of the German Irrigation Company.
- 45·3 60 ft. lattice-girder bridge over Charshembe Su.
- 61·9 **Aryk Ören** station, alt. 1,006 m. Loop 350 yds. and siding. Goods shed with corrugated galvanized iron roof, 40 yds. long. Weighbridge and loading gauge on siding.
- 80·7 **Mandasun** station, alt. (?). Two loops of 350 yds. Open corrugated galvanized iron goods shed, 20 yds. long.
Line passes through open flat valley, about 4 miles wide, into plain of Karaman.
- 102·3 **Karaman** station, alt. 1,006 m. ; water tank. Three loop sidings 400 yds. long. Turntable and engine shed for 2 locomotives. Store with loading stage. Open corrugated galvanized iron goods shed.
- 110 Line passes through a marsh.
- 119 **Sidrova** station, alt. (?); two loops of 350 yds. Open goods shed. No water. Line approaches foothills of Taurus.
- 147·9 **Airanjy Devrent (Derbend)** station, alt. (?). Loop of 350 yds. and siding.
- 160 Line descends, at easy grade, an open flat valley $\frac{1}{4}$ to $\frac{1}{2}$ mile wide, cultivated, between foothills 200 to 300 ft. high.
- 166 Downward gradient, 10 in 1,000. Another valley with stream joins from the r.
- 166·7 Line crosses to r. bank of above stream by plate girder bridge, 5 spans, above 120 ft. in all, with low stone piers. Downward gradient 13 in 1,000 for 5 km.

km.

in valley $\frac{1}{4}$ mile wide, between low foothills, after which line comes out on a wide plain 10 to 15 miles wide, running NE.

172 **Alaja** station, alt. (?). Loop of 320 yds., siding of 160 yds.

Line runs E., at bottom of foothills; easy rising gradient.

188-6 Lattice-girder bridge of 50 ft. span over stream.

189-2 **Eregli** station, alt. 1,044 m.; water tank; three loop sidings of 400 yds. Goods shed (corrugated galvanized iron), 40 yds. long, parcel loading shed, engine shed for 2 locomotives and turntable. Two-storied station building. Good road to town of Eregli, $\frac{3}{4}$ mile to N.

For the continuation of the Baghdad Railway eastwards of Eregli, see *Handbook of Asia Minor*, vol. iv, part 2, p. 158 ff.

ROUTE IV

OTTOMAN [SMYRNA—AIDIN] RAILWAY

This railway is described in detail in *Handbook of Asia Minor*, vol. ii, p. 129 ff. The 94 kilometres from Dineir to Egerdir form part of the communications of the area described in the present volume, and the description of this sector is repeated here.

Kilometres
from Smyrna

376-575 **Dineir** station, alt. 866 m.; loop-line for 58 carriages; sidings for 212 carriages; water tank. Small hotel near station.

391-060 **Kara Kuyu** station, alt. 1,016 m.; loop-line for 40 carriages; sidings for 71 carriages.

398-705 **Chapaly** station, alt. 1,015 m.; loop-line for 40 carriages; sidings for 92 carriages; water tank.

Kilometres
from Smyrna

- 412·385 **Kechiborlu** station, alt. 1,010 m.; loop-line for 36 carriages; sidings for 65 carriages.
- 424·050 **Baladyz** station, alt. 933 m.; loop-line for 66 carriages; sidings for 104 carriages; water tank
- 446·580 **Kule Önü** station, alt. 930 m.; loop-line for 36 carriages; sidings for 93 carriages; water tank.
- 471·120 **Eğirdir** station, alt. 953 m.; loop-line for 22 carriages; sidings for 200 carriages; water tank.

ROADS AND TRACKS

SUMMARY

(Routes marked * are not shown in the Route map.)

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ROUTE 1

KONIA—SUVEREK, *via* TILKI KHAN AND TUTUP

Measured distance, 39 $\frac{3}{4}$ miles

The following route has been measured by trocheameter. The journey was made in wet weather, and between Konia and Egribayat there was a certain amount of winding to avoid water-logged areas.

miles	
0	Konia , Hill of Amphilocheus. Leaving Konia road goes northwards through the gardens of the city.
5 $\frac{1}{2}$	Reach the railway beside km. 424 (Konia station is at km. 433.7). Route now follows the railway.
7	Dikili Tash ('Standing Stone'), a Roman milestone (?) with a yaila of the same name near it. Dikili Tash is known to all the natives, and would serve as a landmark or rendezvous. It is 9 $\frac{1}{8}$ km. from Konia station, close to and E. of the railway.
12 $\frac{1}{2}$	Kayajyk Yaila , beside the railway (N.B. on another journey, in dry weather, and by a shorter road, the distance between Dikili Tash and Kayajyk Yaila was measured as 4 miles). Direction now NE.
22 $\frac{1}{2}$	Tilki Khan , at the southern end of pass over Boz Dagh. An alternative road from Kayajyk Yaila to Tilki Khan goes a little N. of E. by Zazadin Khan , 4 $\frac{1}{2}$ miles, then N. to Tümek Yaila , 1 mile; crosses the direct road Konia—Egribayat, 1 $\frac{3}{4}$ miles; passes an old khan, 3 $\frac{3}{4}$ miles, and reaches Tilki Khan, 1 mile. Total distance, Kayajyk to Tilki Khan, 12 miles.
22 $\frac{3}{4}$	A road goes off r. to Egribayat , 2 $\frac{1}{4}$ miles. Egribayat, a small village, lies in a fertile little plain under the col to the N., with outlying knolls bounding it to S.

miles

Near these knolls, bearing 155° from Egribayat and $1\frac{1}{4}$ miles away is a ruined site called **Kulak Murad Khan**, with a well. $1\frac{1}{2}$ miles farther S. is **Musku Yaila**.

Road now begins to ascend over the pass.

24 $\frac{1}{2}$ Summit 200 ft. above Egribayat; mean gradient, about 1/50. The descent to the N. is also gentle.

27 **Tutup**, a small village lying in the plain in the corner between the col and the NE. arm of the Boz Dagħ. Close to it is a mound and cemetery. Natives say that there is no direct road to Zengijek, which bears about 75° . According to native reckoning, Meidan is 4 hours distant, Ladik 6 hours.

Hence road proceeds NE., along the edge of a great plain, keeping the foothills of the northern arm of the Boz Dagħ on the r.

29 $\frac{1}{2}$ Road passes an old cemetery close to a mound on the NW.

30 $\frac{3}{4}$ **Ahmet Agha Khan** to l.

33 $\frac{1}{4}$ A road goes off r. to **Sarnych Yaila** $1\frac{1}{2}$ miles. This yaila lies on the foothills of the range to the r., with a NW. exposure.

34 $\frac{3}{4}$ **Ölmez**, small village, 1 mile to l.

39 $\frac{3}{4}$ **SuvereK**.

ROUTE 2

KONIA—SUVEREK, by MEIDAN

Measured distance, 42 $\frac{1}{2}$ miles

Route follows the chaussée (Route 21) to opposite Bagħ-regurt Yaila where it strikes off r. over an easy pass bearing about 65° . From the point where route leaves the chaussée to **Meidan** village is 4 miles, to **Meidan** station $6\frac{1}{2}$ miles. From Meidan station route goes over a gently undulating plain on an average bearing of about 60° to **Chaldere** village (10 miles). For the road Chaldere—SuvereK ($14\frac{1}{4}$ miles) see Route 64.

ROUTE 3

KONIA—SUVEREK, by **Haji Velinin Khan**Measured distance, $39\frac{3}{4}$ miles

Leaving **Konia** (Konak), the road keeps along the railway, coinciding with Route 1 as far as **Kayajyk**, and reaching **Gerriz**, a new village close to **Punar Bashy** station (14 miles).

Punar Bashy village lies in a fertile grassy valley, with poplars, 1 mile to the NW. A road ($6\frac{1}{4}$ miles) connects **Punar Bashy** village with **Dokuz Devrent Khan** on the chaussée (Route 21).

From **Punar Bashy** station road proceeds E. for 1 mile, and, striking a north-going road beside a well (15 miles), turns N. At $20\frac{1}{4}$ miles it reaches **Haji Velinin Khan**, at the southern end of a pass over **Boz Dagh**, and running NE. at $22\frac{1}{2}$ miles reaches the summit of the pass, which carries a very poor road, hardly suitable for wheeled traffic. From this point **Tutup** bears 55° . Road descends, and at 23 miles passes a tumulus $\frac{1}{4}$ mile to the l. Presently road turns r. at a small angle, and at 27 miles reaches **Tutup**. Hence by Route 1 to **Suverek**.

ROUTE 4

KONIA—SUVEREK, by **MERNEK**

Total distance, $46\frac{1}{4}$ miles ; measured **Konia**—**Egribayat**, and **Mernek**—**Suverek** ; **Egribayat**—**Mernek** estimated

Leaving **Konia** go to **Egribayat** by Route 1 (25 miles). Hence by an easy winding pass which bears about 70° for 2 miles and then about 60° to **Mernek Yaila** (about 34 miles). **Mernek Yaila** lies in the southern corner of a recess running

into the Boz Dagħ from the N. At 1 mile E. of Mernek Yaila there is a steep hill crowned by a strongly-built rectangular ancient fort. The hill is surrounded on three sides by deep glens and divided by a saddle-back from the main ridge to the NW. From the hill a good view is obtained over the pass leading to Egribayat, whose general direction is 240° . Half-way down the hill are the ruins of an ancient cistern, beside which is a modern well.

From **Mernek** a road goes NE. over hilly country to join Route 64 at **Kochash**. At 4 miles it passes **Zulmandanyk Khan**, a large ruined khan with the remains of a village around it. Hence, ENE. to **Göljik Yaila**, 5 miles, and **Kochash**, 6 miles.

From Mernek our road goes N. through an open valley to **Zengijek** (39 miles), and hence either by **Akja Shahr** to **Suverek** ($46\frac{1}{4}$ miles) or by **Zengijek Kale** to **Suverek** ($44\frac{3}{4}$ miles) (see Route 64).

ROUTE 5

SUVEREK—ANGORA, *via* MANDRA

Measured distance, $118\frac{1}{2}$ miles.

This road is little used now. Traffic from Konia to Angora goes round by the railway in two days; a journey along the road, on horseback or in an araba, takes five days, and leads over dreary and sparsely populated country.

As usual on the central plateau, there is generally a choice of two or more roads from point to point. From Inevi onwards, there are two main routes, keeping respectively east and west of the Karaja Dagħ (see Route 6). North of Suverek, water is plentiful, and there are many springs and fountains; south of Suverek, only wells. Fuel and fodder scarce; good grass north of Oramanly.

The old posting stages on the Konia-Angora road are as follows :

Konia-Suerek,
Suerek-Inevi.
Inevi-Mandra.
Mandra-Aghaboz.
Aghaboz-Angora.

miles

- 0 Leave **Suerek** and go N. over the plain, with low hills on r.
- 7 **Hoidus** village to r. ; forward bearing 3°.
- 12 A road crosses, going to **Chevrik Chiftlik**, 1 mile E. Chevrik lies in a fertile little depression watered by a stream. It is the head-quarters of Hussein Effendi, a rich and hospitable Kurd, who keeps large flocks of sheep. A good camping-ground. There are two or three well-built, clean houses. The road goes from Chevrik via Ak Ören to Eskil or Sultan Khan.
- 15 Devrent to r., and behind it a small salt lake called Boluk Göl. Less than $\frac{1}{2}$ mile N. of this point there is an ancient cemetery with the ruins of an ancient village a little l. of the road. Route ascends a gradual slope.
- 19 Isolated hill called Boz Dagħ to l. This hill is visible from many points as far N. as Oramanly, and should be noted as a landmark. From this point a view is obtained of the great salt lake E.
- 19 $\frac{1}{4}$ A road goes off r. to the salt lake. Forward bearing 12°. Route descends gently and enters a fertile valley.
- 24 $\frac{1}{4}$ Cross a bridge over a stream (the Insuyu) flowing E. to the salt lake, and enter **Inevi**, a biggish village on the N. bank of the stream, with a *mudir*, a police station, and a khan. Good supply of fountain water. A road goes off W. to Insuyu (see Route 7 c). The salt lake is said to be 3 hours distant. A small hill, Kara Tepe, lies 1 hour NE.
- From Inevi road goes N.

miles

- 27 $\frac{1}{4}$ Pass a yaila, **Yasty Ören**. Forward bearing 15°.
- 31 $\frac{1}{2}$ **Chorgia Hüyük**, a small village close to a big mound.
Hence over gently rolling country.
- 40 $\frac{3}{4}$ **Oramanly Yaila**. On the east, about 4 miles distant, is a low ridge, Tavshan Chale Dagħ, lying between bearings 35° and 100°. The Boz Dagħ, N. of Boluk Göl, lies at 191°, the hill beside Kozanly (see Route 6), at 322°, and the peak of the Karaja Dagħ at 345°. All are clearly visible.
- 44 $\frac{3}{4}$ **Oramanly** village. The Boz Dagħ still bears 191°. Route turns slightly more to the E., and passes through the broad gap between the ridge E. of Kozanly and the Tavshan Chaie Dagħ. At mile 47 $\frac{1}{2}$ the Boz Dagħ, bearing 195°, is seen for the last time.
- 49 $\frac{3}{4}$ Fountain. The road to Kulu Köi strikes off r. Route follows a small stream.
- 52 $\frac{3}{4}$ Fine spring. Route runs hence over rich meadow land.
- 58 $\frac{1}{2}$ **Mandra**, a village of Tatar immigrants, lying under the eastern foothills of the Karaja Dagħ. Forward bearing 340°.
- 62 **Attilar** village. From Attilar to Aghaboz route keeps roughly along the watershed between the Kyzyl Irmak and Sakaria systems, and is never far from springs. It now bears 323° for just over 2 $\frac{1}{4}$ miles, where it passes the head of a valley carrying a stream eastward. $\frac{3}{4}$ mile farther on the road turns to 15°.
- 66 $\frac{1}{4}$ Eastern end of **Göghler Göl**, a lake about 1 mile long, lying E. and W.
- 68 $\frac{3}{4}$ The road now enters a broad flat plain, the Kuru Chöl, with marshes in the middle, and passes along its eastern side bearing 351°. A small stream enters the plain along with the road, flows alongside the road for 2 miles, and then makes for the marshes to l. In the SW. corner of the plain, about 3 miles from the road, lies **Khima (Kima ?)** village.

miles

- 73 Route still lies in the plain ; forward bearing now 356° . Khima Kōi bears 265° , on the W. side of the plain.
- 74 A road goes off to **Tresh Kyshla**, a village on the hill-side $\frac{1}{4}$ mile to r.
- 75 $\frac{1}{4}$ Forward bearing 322° , turning gradually round a few degrees farther N.
- 76 $\frac{3}{4}$ The plain continues to the NW., and the road goes straight on to **Bezir Khane**. Present route follows a road to the r., bearing 2° , and enters undulating country.
- 78 The road forks. A branch goes off r. at 10° . Present route proceeds at 345° , turning gradually round to N.
- 80 $\frac{1}{2}$ **Shimshit**, a village with a big mound. **Karaja Ören** (see Route 6 c) is reported 2 hours away SW., **Güzelje Kale** 3 hours SW. From **Shimshit** there is a good view along the northward extension of the plain left $3\frac{3}{4}$ miles back. It stretches about 7 miles to the NW.
Route leaves **Shimshit** at 7° and turns gradually to the l. through hilly country.
- 83 $\frac{3}{4}$ The road forward is visible for a long distance, mounting a valley and bearing 330° .
- 84 $\frac{1}{4}$ **Bezir Khane** (see Route 6 d) lies due W., 2 miles distant.
- 84 $\frac{3}{4}$ Cross the road from **Bezir Khane** to **Yörelî** (Route 61). Road ascends a ridge.
- 86 $\frac{1}{4}$ Summit. This ridge divides the valley just left from another on the E. A stream rises here, and flows down the broad eastern valley as far as the eye can reach. On the r. bank, about $\frac{1}{2}$ mile down, is **Sogh Ujak** village ; about $2\frac{1}{2}$ miles, **Mehmethî** village. The road forward down the slope and a distant peak bear 318° . Route follows this line for $\frac{3}{4}$ mile and then turns to 353° . It now begins to cross the valley.
- 87 $\frac{1}{4}$ **Baghche** village, about 2 miles to l., on the slope

miles

of the ridge which bounds the valley towards the N. Route follows bearing 353° over the valley.

92½ **Aghaboz** village, in a depression under the ridge on the N. of the valley.

From Aghaboz the forward bearing is 354° .

98¼ Join the chaussée from Kaisari to Angora, and turn l. down a valley beside a stream.

98¾ Turn N. out of this valley into **Chatal** village. In this village stands the stone marking the 33rd km. from Angora ($20\frac{1}{2}$ miles). Hence to Angora the route follows the line of the chaussée, generally on the more comfortable cart-road which runs roughly parallel with it, occasionally, when compelled by the nature of the ground, coinciding with the chaussée.

The chaussée runs along the E. side of Mohan Göl.
106½ **Gölbashy**. Road then passes between Mohan Göl and Emir Göl, two marshy lakes. It next mounts the slopes of the mountain S. of Angora, keeping to the W. side of the conical peak of Chal Dagħ.

A traveller reports that no road could pass by the NE. side of Emir Göl. He mentions a village **Örenjik**, $10\frac{1}{2}$ miles from Angora, beside the head of Mohan Göl (possibly identical with Gölbashy), and a village, **Kara Oghlan**, $13\frac{1}{2}$ miles from Angora, E. of the chaussée.

110¾ Summit. Descent into the Angora valley.

118½ **Angora**.

ROUTE 6

SUVEREK—ANGORA, *via* KOZANLY, 117 miles

This route coincides with Route 5, Suverek to Inevi. There is no record of the section Inevi-Yenije Oba. The distance is estimated from the map. From Yenije Oba to Balchy Hissar, trocheameter measurements. Thence to Angora, dead reckoning.

miles

0

Suverek.

24½

Inevi. The road goes NNW., keeping E. of the low hills N. of Insuyu.

38¾

Yenije Oba village, lying near the S. edge of a flat plain, bounded to S. by a fringe of low hills, to W. by a gentle slope, to E. by the Tavshan Chale Dagħ, and to NE. and N. by the Karaja Dagħ. Several yailas of Yenije Oba lie in the plain. Hence the road goes N., straight over the plain, leaving two chiftliks to l.

45½

Bulduk, a fair-sized village, with several good fountains. 1½ mile from Bulduk, bearing 60°, there is an isolated hill rising out of the plain, with remains of ancient buildings. It affords a good view over the plain.

From Bulduk route goes E. of N.

47¾

Fountain to l. **Haji Ibrahim Yaila** ½ mile to r., N. of Bulduk Hill.

49¾

Tosun Yaila, ¼ mile to r. Kozanly is visible, bearing 35° over open country.

54½

Kozanly, a large village, with several fountains. Close to it on the W. is a conspicuous hill of no great height, giving a view over the plain as far as Tavshan Chale Dagħ. W. of Kozanly, and of the road from Bulduk to Kozanly, the ground rises, cutting off the view. The Karaja Dagħ lies between bearings 5° and 101°. The highest peak bears 24°.

From Kozanly the road mounts a rise NW., keeping the foothills of Karaja Dagħ on the r.

60½

View opens out of a small fresh-water lake, the **Samsam Göl**, extending in a NW. direction between the bearings 180° and 240°, about 1½ mile away. It is narrow in the middle, and widens on the SE. and especially on the NW. A stream coming from Palta In, the Zebiri Balia Chai (see below), enters it near the N. end. Road forward 325°.

miles

62½

Dik Kulak, village. Direction now N.

63½

Yergum village, off the road to l. Still going N., route strikes the road from **Karakilisse** (Route 6 B) and crosses the bridge over the **Zebiri Balia Chai**.

65½

Enter **Shahulu** village. The Zebiri Balia Chai flows from near **Palta In** (see below) to the lake mentioned above, down a valley of rich meadow land, with good crops of cereals. This valley is bounded E. and W. by low hills. A valley runs E. opposite **Shahulu** towards the northern foothills of the **Karaja Dagħ**, branching itself into three valleys. The most southerly runs up to **Kyrklar**, near the peak of **Karaja Dagħ**. The next in order runs up to **Karakilisse** and beyond, carrying the road via **Karakilisse** to **Mandra** (see Route 6 B). The most northerly valley runs up to **Jany Ana** (see Route 6 E).From **Shahulu** route goes slightly E. of N. along the right bank of the stream.

66½

Saz Aghach village. Direction now due N.

67¾

Yengijek village, also called **Torunlar**.

68½

A road goes off to l. at right angles.

68¾

A road crosses at right angles.

69½

Postan Kuyu village. Here a road goes off to r. at right angles. Direction still due N.

70¾

Palta In village. A road goes off at 290° to **Gök Göz** (Route 8 B), said to be 1½ hour distant. The peak of **Karaja Dagħ**, called here **Kyrklar Tepe**, bears 122°. Forward bearing now 30°.

72½

Balchy Hissar village. The last six villages are Kurdish. (From **Balchy Hissar** to **Güzelje Kale** the distance is estimated from the map: a road was reported, but not traversed.)

75½

Güzelje Kale Köi, a village with a hill crowned by an ancient fort on the SW. From **Güzelje Kale Köi** roads run to **Bezir Khane** and to **Shimshit** (Routes 6 D and 6 C).

miles

(From Güzelje Kale Köi to Angora the old post-road was carefully traversed by a French traveller in 1861. The scale is given in hours, the estimated distance being $3\frac{1}{4}$ miles to the hour. The following details are likely to be still of value.)

From Güzelje Kale Köi route goes due N. along the W. edge of a valley about 2 miles broad.

77 $\frac{1}{2}$ **Totak** village to r.

78 $\frac{1}{4}$ A small stream rises and flows NE. Route turns slightly to the W.

80 $\frac{1}{4}$ Cross a small stream flowing NW. Midway between these two streams, to the r. of the road, is a village, **Chalysh**. Route goes NW. for 2 miles and then N. for $1\frac{1}{4}$ mile.

84 **Chuluk** village off the road. General direction still N.

84 $\frac{3}{4}$ Cross a stream flowing E., and cross a plateau.

91 $\frac{1}{4}$ **Orungush** village to r., in the valley of a small stream flowing NE. Some grass.

94 Cross a stream flowing SW.

98 $\frac{1}{4}$ Fountain to r.

99 $\frac{3}{4}$ **Yavrujyk** village r.

102 $\frac{1}{4}$ Cross a stream flowing E. with a fountain on l. bank.

104 $\frac{1}{4}$ Hill to r., between the road and the Mohan Göl, a marshy lake, dry in summer. The natives say that the water of the lake is undrinkable.

109–110 Cross the pass over the mountain range S. of the Angora valley. A stream, the **Kara Dere Su**, flows N. Several villages are passed.

117 **Angora**.

LATERAL COMMUNICATION BETWEEN ROUTES 5 AND 6

As far as **Kozanly** on Route 6 and **Oramanly** on Route 5 the country between those routes is open plain or gently undulating upland, and lateral communication is everywhere easy. A road from **Insuyu** NW. of Inevi, to **Chorgia Hüyük** (see Route 5) is recorded taking 2 hr. 53 min. on horseback.

There is no record of any other lateral route in this region, but there must be many lateral cart-roads.

Between **Kozanly** and the plain N. of **Oramanly** communication is more difficult, being impeded by the southward extension of the **Karaja Dag**. No route has been recorded S. of that which crosses the broad pass from **Kozanly** to **Mandra**, but there may be several.

Roads lead from **Mandra** (a) S. of the **Karaja Dag** to **Kozanly**; (b) N. of the **Karaja Dag** to **Shahulu** or to **Torunlar**. The space between those routes is occupied by the **Karaja Dag**, which is impassable for traffic.

N. of the **Karaja Dag** and up to the high range bounding the **Angora** valley on the S., we are in a region of rounded ridges and valleys, which nowhere offer serious obstacles to traffic. In this region lateral communication is everywhere easy. The following routes are recorded; but there are certainly many more.

(a) **Shimshit** to **Karaja Ören** and **Güzelje Kale**.

(b) **Bezir Khane** to **Karaja Ören** and **Güzelje Kale**.

(c) **Karaja Ören**, via several villages N. of the **Karaja Dag**, to **Dik Kulak**. This is not properly a route, but a journey winding from point to point.

ROUTE 6 A

KOZANLY—MANDRA, 12½ miles

miles	
0	Kozanly . Forward bearing 42°.
1	A road goes off l.
1¾	A road goes off l. Forward bearing 76°.
2¼	Road forks. Route follows the left branch, bearing 30°.
2¾	A yaila of Kozanly ½ mile to r.
3½	Forward bearing 42°. Route lies now close to the foothills of Karaja Dag .
5	Hissar village lies N. of this point, about 3 miles

miles

distant, half-way up the mountain side. Route turns more to the N., bearing 7° .

- 7 **Arsynjy** (Arshynjy ?), a Kurd village, in the vilayet of Angora.

A road leaves Arsynjy at 120° , going to Chalkiani $1\frac{1}{2}$ hour distant.

From Arsynjy route goes due E. to

- 9 **Kostengil**, a Circassian village in Konia vilayet, Inevi Kaza. Forward bearing 13° .

- $9\frac{1}{2}$ Road forks. The right branch goes on E. towards Mandra.

The left branch turns to 344° , and goes straight to **Yarashly**, a fair-sized village in a valley of the Karaja Dag, $2\frac{1}{2}$ miles from Kostengil. It is pleasantly situated among trees, with a stream running through the village, and flowing E. In the rising valley behind it and the semi-circle of hills to the N. are extensive ruins. 2 miles NW. of Yarashly stands a hill with a broad flat top, on which there is a remarkable ancient fort. It consists of a rampart of earth and stones, carrying a stone wall several yards wide, the total circuit being about $\frac{1}{2}$ mile. At the NE. corner there is a huge artificial bastion protecting the fort at the weakest point, where a saddle-back ridge leads to another height, some distance away. Inside are remains of ancient buildings. This hill commands the whole plain to the E. In that direction Seid Ahmetli is dead ground, but Kostengil, Chalkiani, Mandra, Attilar, Kara Hamsalar, Chüpler, Kulu Köi, and Bash Khan, the last beyond the head of the Salt Lake, are clearly visible. The fort is commanded from the highest peak of Karaja Dag, estimated $2\frac{1}{2}$ miles distant by air-line bearing 255° . From Yarashly, a road leads E. to an old cemetery, then N. round the hill E. of Yarashly, to **Seid Ahmetli**, village, 3 miles from Yarashly.

- $12\frac{1}{2}$ **Mandra**. 3 miles from the road fork by the right branch.

ROUTE 6 B

MANDRA—SHAHULU $16\frac{1}{4}$ miles

miles

- 0 **Mandra.** Forward bearing 310° .
- $3\frac{1}{2}$ **Seid Ahmetli** village. Forward bearing 340° . Route now climbs the eastern shoulder of Karaja Dag.
- $4\frac{1}{2}$ A road goes off r. Forward bearing now 290° , and tending farther W.
- $4\frac{3}{4}$ A valley opens on the l. A road mounts this valley to **Dibdere**, 1 mile distant. Fields of wheat and barley are passed. A little farther on, a road coming from Dibdere crosses the route and goes E. Forward bearing now 314° .
- $6\frac{1}{2}$ **Haji Ahmet Kuyu.** A few houses. Forward bearing 285° , then 280° , down a ravine with a stream accompanying the road.
- $8\frac{1}{4}$ **Karakilisse** village (Kurds), at the bottom of the ravine, and at the head of a long valley running W. Close behind Karakilisse there is a ridge running down from Karaja Dag, dividing Karakilisse valley from the valley running up to Kyrklar. From a point on this ridge, with Karakilisse bearing 41° , $\frac{3}{4}$ mile distant, an excellent view is obtained over the undulating uplands to the N. Karagedik, Bezir Khane, Totak, Shahulu, and Saz Aghach are recorded as visible.

At points not exactly determined, between Karakilisse and Aidoghan Yaila, roads strike off from the route to Torunlar route (6 miles from Karakilisse) and to Dik Kulak route ($8\frac{1}{4}$ miles from Karakilisse).

From Karakilisse the road goes slightly S. of W. round the end of the above-mentioned ridge.

- $10\frac{1}{4}$ Route is now opposite the end of the Kyrklar valley.

miles

A mule-track goes off to **Kyrklar** (bearing 150° , distance not recorded) passing, 2 miles away, an ancient cemetery with a well. Cereals grow in the valley.

Forward bearing is now 238° .

12 $\frac{1}{4}$ Cross a road at right angles. 2 miles to r. along this road, ruins are seen.

13 Forward bearing 248° . Shahulu is now visible.

14 $\frac{1}{4}$ **Aidoghan Yaila**, Kurds; extensive ruins with large boulders.

15 $\frac{3}{4}$ Cross bridge over **Zebiri Balia Chai**.

16 $\frac{1}{4}$ **Shahulu** village.

ROUTE 6 C

SHIMSHIT—GÜZELJE KALE KÖI, 12 miles

miles

0 **Shimshit.** Bearing SW., the road crosses a valley, rises over a ridge, and enters the plain of **Karaja Ören**.

3 $\frac{3}{4}$ The road from **Burun Kuyu** joins on the l. From this point **Karaja Ören** bears rather S. of W. The road describes an arc round the hills on the l., with an open plain on the r.

6 **Karaja Ören** village, at the S. edge of the plain. Route now goes SW. and then S.

12 **Güzelje Kale Köi.**

ROUTE 6 D

BEZIR KHANE—GÜZELJE KALE KÖI, 16 $\frac{1}{2}$ miles

miles

0 **Bezir Khane.** Route crosses the ridge to the SW. by an easy pass.

1 $\frac{1}{2}$ Enter a plain, and turn S. along its eastern edge,

miles

with hills on the l. Road then strikes over the plain SW. **Totak** is sighted some distance to the W.

10½

Karaja Ören.

16½

Güzelje Kale Köi.

ROUTE 6 E

KARAJA ÖREN—DIK KULAK, 18 miles

miles

0

Karaja Ören. The bearing of Burun Kuyu (not visible) is indicated as 93°. Route describes an arc round the hills E. of Karaja Ören, trending N. of this bearing.

2¼

The road to Shimshit goes off l. Still hugging the hills on the r. the road passes a valley running into them, with some ancient ruins.

3¾

Burun Kuyu, a small village. Hence the road proceeds along the W. side of a flat valley, bearing 197°.

6¾

Gölbek village. Direction still SW.

10

Cheltik village. One hour hence, on the opposite side of the valley, bearing 112°, is a village, **Altyn Chana**. Route now crosses the valley, bearing 145°.

10

Göghler village. Road now mounts the hills on the SW., bearing 230°.

11¾

Tayr Effendi Yaila, a few houses. Karakilis (Route 6 B) lies WSW. from here, ½ hour distant. Route next goes rather N. of W. down a valley carrying a stream.

13¾

Janym Ana village. This village lies at the meeting of two valleys, one running E. and W., the other ESE. and WNW. Down the valley from Tayr Effendi Yaila comes a stream, which runs down the combined valley westwards, towards the Zebiri Balia Chai. There is a hillock W. of the village, an ancient site,

miles

with a modern cemetery. Karakilissee is indicated on the bearing 197° , 1 hour distant, not visible.

Hence the road descends the valley westwards for 2 miles, where the valley coming down from Karakilissee is joined. A little farther on, the valley opens out, and, on the right, the valley of the Zebiri Balia Chai runs N.

17½ A road, said to be to **Kyrk Punar**, 2 hours distant, goes off l. bearing 215° .

18 **Dik Kulak**.

ROUTE 7

SERAI ÖNÜ STATION—KOZANLY (71 miles)

miles

0 **Serai Önü** station. The road goes N.

1 **Serai Önü** village (see p. 263). The average forward bearing is about 25° , over a plain with very gentle undulations, which cut off the view of places near at hand, but leave the mountains to the S. and the Boz Dagħ to the E. continually in view. Nevine Dagħ, or the escarpment of the mountain range S. of Ladik, are good points of direction.

9 A road goes off r.

13 Cross an important road from W. to E. This road comes from Gozlu on the W. and evidently goes E. to the Salt Lake via Toprak Kale, throwing a branch S. to Suverek. A large beaten road in this region must be used for the salt trade between the Tuz Göl and the W. An old traveller used this road from Gozlu to Suverek (Route 8 A.)

13½ A road goes off r. (possibly an alternative road to Sengen).

14½ **Sengen** village, at the W. edge of a gentle rise in the ground. An ancient site, with extensive ruins.

miles

Nevine Dagh bears 191° . Ladik bears 200° , Gozlu bears 277° , distant 3 hours. Suverek (not visible) is indicated as bearing 120° , distant 6 hours, Dedeler (not visible) as bearing 143° , distant 3 hours.

The road proceeds somewhat N. of E., with a gentle rise on the r. and a view over the level plain on the l.

16 $\frac{1}{4}$

A road goes off r., joining an important road which is crossed 100 yds. farther on. This road must lead from Gozlu and Kolu Kissa on the W. to the Salt Lake, and probably joins Route 5 near the Boz Dagh, where a road goes E. to the Salt Lake (Route 8 B).

Forward bearing 10° .

17 $\frac{3}{4}$

Cheshmeli Zebir is now visible, bearing 6° . Nevine Dagh bears 190° . The rise on the r. is more pronounced, and culminates in a distinct hill SE. of Zebir.

26 $\frac{1}{2}$

Cheshmeli Zebir ('Zebir with the fountains'), a large village with a high mound, marking an ancient site. It has a copious supply of fountain-water. Nevine Dagh bears 189° . E. of the village there is a wide pass, through which a road goes to Insuyu.

From **Cheshmeli Zebir** to **Kötü Ushak** two routes are known: (A) by Kelhassan (31 $\frac{1}{4}$ miles), (B) by Karanly Kale (about 20 $\frac{1}{2}$ miles). Both have been traversed in a phaeton with springs, but only (A) has been measured by trocheameter.

ROUTE A

26 $\frac{1}{2}$

Cheshmeli Zebir. The road rises over a ridge, and goes NW.

29 $\frac{1}{4}$

Kuyulu Zebir ('Zebir with the wells'), a village built on both sides of a flat valley, with a mound on the S. side. It is an ancient site. Nevine Dagh bears 187° . A road goes off NW. to the Sangarius valley via Sinanly (see Route 8).

Present route follows a road bearing 26° over undulating ground.

miles

36

Cross a main road from SE. to NW. The road now turns N., and enters a depression in the plain.

40 $\frac{1}{4}$

Bügürü Delik, a village of Russian-speaking and horse-eating Tatars, who immigrated between 1908 and 1912. There is a copious spring of water below the village, which lies in a remarkable depression in the plain, extending for a long distance on the bearing 295°, and running down to the SE. as the valley of the Insuyu river. This depression is bounded on the NE. side by a steep escarpment, which fringes a plateau extending N. to Karanly Kale and Besh Kavak. On the SW. side the boundary of the depression consists of a gradual slope, rising up towards Zebir and Kady Oghlu. The depression consists of fertile meadow-land, watered by the springs which feed the Insuyu river. A road goes SE. to Insuyu and Inevi and NW. to Katyrlı. The natives say that Konia is 18 hours distant, Angora 30 hours. The bearing of Cheshmeli Zebir (not visible) is pointed out as 180°.

Leaving Bügürü Delik, and going NE. the road mounts the escarpment of the plateau.

41 $\frac{1}{4}$

Summit. Forward bearing 15°. A road goes off l.

41 $\frac{1}{2}$

A road goes off l.

44 $\frac{3}{4}$

Roadside shelter.

45 $\frac{3}{4}$

Yaila of Kelhassan.

46

A road goes off l. Forward bearing 330°.

47

Yaila of Kelhassan, **Susus Yailasy**. Route turns more to the N.

49

Kelhassan, a Kurd village, rising northwards up a slope at the head of a fertile little valley. The valley goes on towards the W. There are several fountains, as in most of the villages in this district. Roads go off to **Kandyl**, NW., and to **Katyrlı** and **Kady Oghlu**, W.; see Routes 8 a, 8 i, 8 k.

The road runs E. of N. over the plateau.

miles

- 53 Northern edge of the plateau. Route now descends into a valley dividing the bluffs which form the northern edge of the plateau from a subdued ridge to the N. Behind the escarpment above Ladik (p. 16) is seen, bearing 192° .
- 54½ Reach the bottom of the valley, beside a water-course, and pass a threshing-floor called **Boyalu**. The valley runs E. and W. The watercourse, almost dry, runs down to the plain of Yenije Oba (see Route 6). Route passes down the N. side of the valley.
- 55½ Pass **Besh Kavak Yaila**, on the hillside N. of the valley.
- 57¾ Reach **Kötü Ushak**, village, on the N. side of the valley, where it opens out into the plain. Yenije Oba, in the middle of the plain, bears 125° .
Route turns NE., and crosses the road from Yenije Oba to Besh Kavak a little N. of Kötü Ushak.
- 62 **Bulduk** village (see Route 6).
- 71 **Kozanlı** village.

ROUTE B

This route has been travelled over in a phaeton, but only time-reckonings by an English traveller who did the journey on horseback are available.

It goes NE. from **Cheshmeli Zebir**, over undulating country to **Punar Bashy** 2 hr. 50 min., a small village in the depression referred to on p. 93, mile $40\frac{1}{4}$. (Somewhere in this section **Toslu Kuyu Yaila**, said to be 2 hours E. of Kuyulu Zebir is passed.) Beyond Punar Bashy the road passes a large spring, mounts the ridge NE., and crosses the plateau, passing some Kurdish tents (implying a water supply) to **Kushja** village (1 hr. 46 min.). Hence the road goes NE., descends to the plain of Yenije Oba by a pass E. of **Karanly Kale** (2 miles from Kushja). This is a commodious Byzantine fort on the top of a hill, solidly

miles

built with squared blocks. This hill is a conspicuous landmark in the plain of Yenije Oba. From the bottom of the pass roads go off to **Yenije Oba** (see Route 6) 1 hr. 52 min. from Kushja, and to **Kötü Ushak**, about 5 miles from Kushja. The road to Kötü Ushak passes through an old cemetery close under **Karanly Kale**, and then passes, on the l., two hills standing out of the main ridge running NW. from **Karanly Kale**, and bounding the plateau on the N. From this point, Kötü Ushak, Yenije Oba, and Bulduk Hill are visible. Total estimated distance, **Cheshmeli Zebir to Kötü Ushak**, 20½ miles.

LATERAL COMMUNICATION BETWEEN ROUTES 1 AND 6 (SECTION KONIA-KOZANLY) AND ROUTES 21 AND 7 (KONIA-SERAI ÖNÜ AND SERAI ÖNÜ-KOZANLY)

From **Konia** to the **Boz Dagħ**, and N. of the **Boz Dagħ**, the plain is perfectly flat, and can be crossed anywhere in dry weather. After rain, marshes may form in the region round **Zazadin Khan**. The following roads, establishing lateral touch between Route 1 with Route 6, and Route 21 with Route 7, have been traversed in a phaeton, and measured by trocheameter, except where stated.

ROUTE 7 A

KONIA CHAUSSÉE—DIKILI TASH, 3¾ miles

A road leaves the chaussée at a point 6¼ miles from **Konia**, and goes to **Dikili Tash** (Route 1), length 3¾ miles.

ROUTE 7 B

DOKUZ DEVRENT—PUNARBASHY STATION, 7 miles

A road leaves the chaussée at **Dokuz Devrent Khan** and goes to **Punar Bashy** station. Length 7 miles.

ROUTE 7 C

BAGHREGURT—TUTUP, 15 miles

A road leaves the chaussée near **Baghregurt Yaila** and goes to **Meidan** station (Route 2), length $6\frac{1}{2}$ miles. From **Meidan** station a road goes over the plain on a bearing of 120° to an old cemetery, 1 mile. Hence to **Gövench** village, in the plain just N. of the hills, $5\frac{1}{2}$ miles. From **Gövench** to the Tutup-Suverek road there is no record, the distance is at most 2 or 3 miles. Total distance, **Baghregurt** to **Tutup**, 15 miles.

ROUTE 7 D

LADIK—TUTUP, 19 miles

A road goes from **Ladik** to **Meidan**. It strikes off the chaussée at a point 350 yds. E. of **Devrent Khan**, passing two chiftliks $4\frac{3}{4}$ miles farther on, and reaching **Meidan** station, $8\frac{1}{2}$ miles. Hence to **Tutup** by the last route. Total distance, **Ladik** to **Tutup**, 19 miles.

ROUTE 7 E

ROUTE 7, MILE 13—SUVEREK, 21 miles

A road crosses Route 7 at mile 13, S. of **Sengen**. It was used by an old traveller going to **Suverek**, and it almost certainly throws off a branch towards the Salt Lake, probably via **Toprak Kale**. It is still much used. The old traveller took 9 hours from **Gozlu** to **Suverek**. He must therefore have taken 6 hours from Route 7 to **Suverek** (about 21 miles). He mentions wells along the road, and says that it rises gradually over a plateau, furrowed by many gullies.

ROUTE 7 F

ROUTE 7, MILE 16 $\frac{1}{4}$ —ROUTE 5, 21 miles

A similar road crosses Route 7 at mile 16 $\frac{1}{4}$ S. of **Cheshmeli Zebir**. This road must pass near or through **Örek Yaila** and **Karabagh**, and strike Route 5 between **Chevrik** and **Inevi**, probably near the **Boz Dagħ**, whence a road goes off to the Salt Lake. It has not been traversed, but is of about the same length as the last (about 21 miles).

ROUTE 7 G

CHESHMELI ZEBIR—INEVI, 24 miles

A road goes from **Cheshmeli Zebir** via **Insuyu** to **Inevi**. It has been traversed in a phaeton. It goes NE. from **Cheshmeli Zebir**, passes **Tosun Kuyu Yaila** and **Punar Bashy**, and then turns r. down the valley of the **Insuyu** stream to **Insuyu**, a village lying in the narrow valley of the stream, with high bluffs N. and S. It continues down the valley to **Inevi** (Route 5). Estimated distance about 24 miles.

ROUTE 7 H

BÜGÜRÜ DELİK—INEVI, 19 miles

A road leaves Route 7 at **Bügürü Delik**, joining the last near **Punar Bashy**, and so to **Inevi** (about 19 miles).

ROUTE 7 I

KÖTÜ USHAK—YENIJE OBA, 6 miles

A road leaves Route 7 a little to the N. of **Kötü Ushak**, and crosses the plain to **Yeniye Oba** (6 miles), passing a yaila of **Kötü Ushak** (2 $\frac{1}{4}$ miles).

ROUTE 8

SERAI ÖNÜ STATION—YAPAN HAMMAM, 95½ miles

Only the southern two-thirds of this route has been measured or travelled over recently. The country S. of the Eski Shehir—Angora railway is mostly known from the reports of travellers who crossed this area before the railway was built, generally travelling E. or W., to or from Angora. The growth of traffic with the railway must have revolutionized the road-system in recent years, developing roads and tracks into the country N. and S. of the line, but the facts are little known.

miles

0

Serai Önü station. Route runs N. through **Serai Önü** village, 1 mile, and then follows the road to **Gozlu**, which is visible from the station, bearing 343°. Passing r. of a fine spring, surrounded by verdure and trees, about 3 miles NW. of Serai Önü, the road goes over a level plain.

13½

Gozlu village. A considerable stream flows past **Gozlu** towards **Kolu Kissa**. The village, which is fairly large and prosperous, climbs up the high ground on the r. bank of the stream. **Serai Önü** station (visible) and **Kadyn Khan** village are both said to be 4 hrs. distant. A road goes to **Kadyn Khan**.

Road goes on in the same general direction, descending the r. bank of the stream through good meadow land, and crosses the stream by a stone bridge.

21½

Kolu Kissa, a large village, where many roads cross. The village is well watered and has good gardens. The nearest point on the railway is **Kadyn Khan** station, 14 miles to the S. According to an old traveller, the stream goes W. and joins the river from **Atlandy**, which loses itself in marshes to the N.

Road now goes N. over a dreary uninhabited plain, never quite flat, but with gentle undulations, straight for the **Ala Dagh**, a low bare ridge extending from NW. to SE. in the middle of the plain.

miles

39

Ali Bey Yaila, a summer village of Sary Kaya, 3 miles NW., both on the E. side of the Ala Dagħ. There is a good fountain here. The road Kolu Kissa—Ali Bey Yaila passes not far to the E. of Bash Kuyu, 6 miles SW. of Ali Bey Yaila, but Bash Kuyu is not visible from the road.

An alternative route from Ali Bey Yaila to Katranjy Innler has been measured in part. It leads down the valley of a stream which joins the Gök Su below Katranjy Innler, but whose name is unknown. It is called below the **Katyrlı Su**, as rising near Katyrlı, but may not be recognized by the natives under that name. Its total length is about 30 miles.

Leaving Ali Bey Yaila, this road strikes N., and joins the road from Sary Kaya to Sülüklü about 2 miles NE. of Sary Kaya. The distance from Sary Kaya to Sülüklü is given as $2\frac{1}{2}$ hrs. or $8\frac{1}{2}$ miles; that from Ali Bey Yaila to Sülüklü is about 9 miles. Sülüklü is a yaila of Katyrlı, and bears about 28° from Sary Kaya. From Sülüklü to **Katyrlı** is estimated from the map as $2\frac{1}{2}$ miles. (Roads run from Sülüklü to **Kelhassan** and to **Zebir**.) At Katyrlı, also called **Hofunun Köi**, the road enters the valley of the **Katyrlı Su**, which is here narrow, but opens out a mile or two farther down, and extends to the N. Leaving Katyrlı, it goes NW., and 1 mile lower down strikes a road which comes from Sinanly on the W. and turns down the valley, bearing 22° , but presently swinging round to the N., and entering **Orta Kyshla** village at 335° . This village lies on the W. side of the river valley, here about 3 miles broad. The distance from Katyrlı to Orta Kyshla is 4 miles. From Orta Kyshla a road crosses the valley bearing 120° to **Kelhassan** (Route 81). **Besh Eshekli** is said to be 3 hours distant. From Orta Kyshla the road

miles

goes on northwards down the valley to Katranjy Innler. It has not been traversed, but the following points were noted during journeys along the high ground on either side of the valley :

The valley is open and flat, and doubtless the road is practicable for wheeled traffic all the way. The villages of Haji Omar Oghlu and Kessik Kavak lie on the high ground on the W. side of the valley. On the E. side of the valley, streams and roads enter it from Kandyl, from Kerpishli, and from Köse Abdulla. A village, Boghaz Kaya, lies on the E. side of the valley, opposite Kessik Kavak, where the stream from Kerpishli enters the valley through a gorge. This route must join Route 8 before reaching Katranjy Innler, but no details are available for this section. Estimated from the map, the distance from Orta Kyshla to Katranjy Innler is 26 miles. Total distance, Ali Bey Yaila to Katranjy Innler, $41\frac{1}{2}$ miles.

From Ali Bey Yaila the road goes N.

44½ Charbashly Yaila, a few huts and tents. Road ascends gently. There is an alternative road (apparently lying some distance to W.) which runs via **Besh Eshekli** ($2\frac{3}{4}$ miles) to Sinanly ($5\frac{3}{4}$ miles).

49½ Sinanly, a filthy Kurd village with a good fountain. Direction now NW.

50¾ Shusagh or Sakusagh Yaila, a few houses.

53½ Another yaila of Sinanly. Road turns more to the N.

60½ Yayjy Oghlu village. This is the last point on the northward journey to which measurements are available. The distance from here to Katranjy Innler, measured from the map, is 16 miles. The road goes over undulating plateau, and must cross the valley of the Katyrlly river a few miles before reaching Katranjy Innler.

76½ Katranjy Innler, a large village, situated on the

miles

stream called **Gök Su**, flowing to the Sakaria. Many of the houses are mere facings to cave dwellings, penetrating deeply into the rock. The road is now on the northern edge of the great plain which stretches from the Sakaria to Konia. From the high ground above the village an extensive view is obtained over the plain as far as the mountains S. of Ladik and Ilghin.

From Katranjy Innler to Yapan Hammam the route details are from the traverse of a French traveller who performed the journey in 1861.

Leaving Katranjy Innler the road fords the **Gök Su** and then goes slightly E. of N. over a plateau covered by a maze of horse-tracks.

82½ Isolated hill to r. Route turns NE.

84½ Ford a brook running S. to join the **Gök Su**.

85 **Sujaly** village, on the S. side of a hillock. Direction still NE. over the plateau.

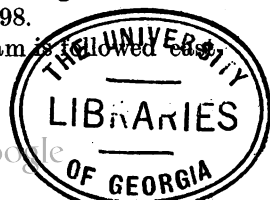
88½ **Eski Chalysh** village. Route turns more to the N. and mounts a ridge, the **Chal Dagh**.

91½ Summit. In front is seen the valley of Yapan Hammam, with a stream flowing NW. through it. Route descends into the valley, and turning r., leaving **Kady Kõi** village about 3 miles to l., goes up the side of the stream.

95½ **Yapan Hammam**, a *kaimmakamlyk* since about 40 years ago, and hence called **Hammam Merkez**, as being the governmental centre of the Haimane. It owes its importance largely to its healthy situation and hot springs, which are resorted to by the natives from as far as Angora.

An alternative route, passing E. of the route detailed below, is described by an English traveller, who crossed it on horseback in 1898.

From Katranjy Innler the stream is followed east



miles

wards to **Kyzyl Hissar** village, $1\frac{1}{2}$ hrs. (**Tabur Oghlu** village lies $\frac{3}{4}$ hr. to the l. of the road). Still mounting the valley of the stream for 1 hr. 50 min., **Kiraz Oghlu** village is passed on the r., and after another 42 min. **Baghchejik** village lies opposite 20 min. up the hillside on the l. The road now runs for 1 hr. 12 min. on the bearing 30° , and then due E. for 25 min. From this point **Katranjy Kõi** bears 150° , 24 min. away. The route then follows the bearing 330° to **Yamak** village, on the opposite side of the valley (1 hr. 10 min.). Here the head of the valley is reached, whence the **Ardyj Dag** is crossed by a road practicable for wheeled traffic, which reaches an altitude of 900 ft. above **Yamak**, and reaches **Yapan Hammam** in $2\frac{1}{2}$ hrs. (Total time, 9 hrs. 19 min. or $32\frac{1}{2}$ miles. The road evidently goes far to the E. of the direct line.)

From **Yapan Hammam** a chaussée goes NW. to the railway at **Polatly** station. No details. Length about 24 miles.

LATERAL COMMUNICATION BETWEEN ROUTE 7 WITH ROUTE 6 AND ROUTE 8.

From **Serai Önü** to the latitude of the **Karaja Dag** the country between these routes has been pretty exhaustively explored, and many lateral roads are known. N. of the **Karaja Dag** there is little information available. But there is no real obstacle to traffic anywhere on this belt, and lateral roads are everywhere easy. The following roads have been travelled over, or are known to exist :

ROUTE 8 A

GOZLU—ROUTE 7, MILE 13

From **Gozlu** (Route 8) to mile 13 on Route 7. A good road, used by the salt trade from the **Tuz Göl** to the W. Length about $10\frac{1}{2}$ miles.

ROUTE 8 B

GOZLU—ROUTE 7, MILE 16 $\frac{1}{4}$

From **Gozlu** (Route 8) to mile 16 $\frac{1}{4}$ on Route 7. Same remark as last. Length about 11 $\frac{3}{4}$ miles.

ROUTE 8 C

KOLU KISSA—KUYULU ZEBIR, 17 $\frac{1}{3}$ miles

From **Kolu Kissa**, Route 8, to **Kuyulu Zebir**, Route 7. A good road. The road goes SW. from Kuyulu Zebir. At a point 8 $\frac{1}{4}$ miles from Kuyulu Zebir the forward bearing is 226°. 2 $\frac{1}{3}$ miles farther on, Kolu Kissa is visible, bearing 235°, and the escarpment above Ladik bears 179°. From this point to **Kolu Kissa** is 6 $\frac{3}{4}$ miles. Total distance, **Kolu Kissa** to **Kuyulu Zebir**, 17 $\frac{1}{3}$ miles.

ROUTE 8 D

BASH KUYU—KUYULU ZEBIR

A road from **Bash Kuyu**, near Route 8, to **Kuyulu Zebir** (Route 7), has been travelled over in a phaeton with springs. No details. Length about 16 miles.

ROUTE 8 E

KUYULU ZEBIR—SINANLY

A road goes from **Kuyulu Zebir** (Route 7) to **Kady Oghlu**, a small village in the plain 6 $\frac{1}{2}$ miles away, bearing about 345°. From **Kady Oghlu** a good road goes NW., joining Route 8 at a point not determined, but before reaching **Sinanly**. Length uncertain, say about 18 miles from **Kuyulu Zebir** to Route 8. A good branch road leaves **Kady Oghlu** and goes N. for 7 miles, where it crosses the road from **Bügürü Delik** to **Katyrlı**, which

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runs away from this point at 310° . It then rises gently on to the plateau, turns NE., and reaches **Kelhassan** village (Route 6), $12\frac{1}{2}$ miles from **Kady Oghlu**.

ROUTE 8 F

SARY KAYA—KELHASSAN, $23\frac{1}{4}$ miles

A road goes from **Sary Kaya**, $3\frac{1}{4}$ miles NW. of **Ali Bey Yaila** (Route 8) to **Sülüklü**, $2\frac{1}{2}$ hrs. according to native reckoning ($8\frac{3}{4}$ miles), bearing about 28° . From **Sülüklü** it goes SE., passes an old cemetery $11\frac{1}{4}$ miles, reaches **Katyrlı Yaila**, $12\frac{3}{4}$ miles, and goes E. to **Kelhassan**, $23\frac{1}{4}$ miles. Another road from **Sülüklü** joins the road from **Katyrlı** to **Kelhassan** (next route).

ROUTE 8 G

SINANLY—KATYRLY, 6 miles

A road goes E. from **Sinanly** (Route 8) to **Katyrlı**, 6 miles. From **Katyrlı** it goes on to **Kelhassan**, 21 miles, being joined on the r. by the road from **Sülüklü** (see Route 8 F), $8\frac{1}{4}$ miles from **Katyrlı**.

ROUTE 8 H

SHUSHAGH—KATYRLY, $6\frac{1}{4}$ miles

A road goes from **Shushagh**, bearing slightly S. of E. to **Katyrlı**, length $6\frac{1}{4}$ miles. It is thus described from **Katyrlı** to **Shushagh**. Leaving **Katyrlı** road goes NW. for 1 mile and joins the road from **Orta Kyshla**, which bears 269° . Just over 2 miles we leave the road (which goes on to **Sinanly**), and take a branch road at 310° . At $3\frac{1}{4}$ miles a road joins ours on the r. (coming from **Haji Omar Oghlu** or **Orta Kyshla**?). The forward bearing is now 290° , the backward bearing 140° . The road gradually bends to the W., and enters **Shushagh**, bearing 260° ($6\frac{1}{4}$ miles).

ROUTE 8 I

ORTA KYSHLA—KELHASSAN

A road leaves **Orta Kyshla**, bearing 120° , for **Kelhassan**. It passes through **Terchal**, 4 miles, and soon after joins the road from **Katyrly** to **Kelhassan** (Route 6). A road goes from **Terchal** to **Katyrly Yaila** (Route 8 F), 7 miles.

ROUTE 8 J

GÜZELJE KALE KÖI—ORTA KYSHLA, $40\frac{3}{4}$ miles

A road goes from **Güzelje Kale Köi** (Route 6) to **Orta Kyshla** (Route 8), throwing off several branches connecting with various points on both these routes.

miles

- | | |
|-----------------|--|
| 0 | Güzelje Kale. The road goes S. of W. |
| $5\frac{1}{2}$ | Büyük Gök Göz village. |
| 12 | Modanenin Cheltik village. Direction now SW. |
| 15 | Sinanly village. Route ascends a ridge behind this village bearing 295° . |
| $15\frac{3}{4}$ | Summit. Forward bearing 300° . |
| 16 | Cross an important road going from SW. to NE. |
| $17\frac{1}{2}$ | A road crosses at right angles. |
| 18 | Köse Abdulla , a Kurdish village situated on a southward-facing shoulder of land between two southward running brooks. Three roads go off from here. One leaves at 168° for Kerpishli , 4 hrs. distant. The second leaves at 205° for Yayjy , 2 hrs. distant. The third, here followed, leaves at 220° . |
| $18\frac{1}{2}$ | Direction changes to 250° . Behind, the peak of Karaja Dag bears 91° . |
| 20 | The road forks. Route follows the r. hand branch bearing 280° . |
| $20\frac{3}{4}$ | Chekirji Yaila , a small Kurd settlement, lying among extensive ancient ruins. There is a good spring |

miles

here. On the bearing 316° , said to be 2 hrs. distant, is a prominent hill called **Mangal Dagħ**. The direction of **Yayjy Chevrik** (not visible) is indicated as 170° . Route proceeds at 233° .

21 $\frac{1}{4}$ Some ancient ruins. Bearing now SE.

23 $\frac{1}{4}$ **Yayjy Chevrik** village, lying at the head of a valley which goes off SW., and gradually turns round to W. A road goes down this valley to Katranjy Innler (see Route 8). Route follows a road bearing 210° down the valley, mounts the ridge and descends.

28 **Yeni Yapan** village, 10 houses, in a valley running E. and W. **Tepe Kōi** village is visible $\frac{3}{4}$ hr. away, bearing 114° , on the S. side of the valley. Kandyl Tekke (see Route 8K), said to be 4 hrs. distant, bears 165° ; Sivri Hissar Dagħ, in the distance, bears 292.5° . The road goes on at 205° .

28 $\frac{1}{2}$ Cross a good road.

29 $\frac{1}{4}$ Forward bearing now 193.5° .

30 Cross a dry river-bed running NW. (to join the Katyrly Su.

31 **Tosthair** village. Kandyl Tekke now bears 147.5° and Sivri Hissar Dagħ 296° . Kessik Kavak (see Route 8), is seen on the opposite side of the Katyrly Su valley, about 2 hrs. away, bearing 270° . Forward bearing now 230° across a valley.

31 $\frac{1}{2}$ Cross a road running from SE. to NW. along the valley.

32 $\frac{1}{4}$ Summit of the ridge bounding the valley on the SW. Forward bearing 225° . Route descends into the valley of the Katyrly Su.

33 $\frac{1}{2}$ Cross an important road from S. to N. (Route 8, alternative branch).

34 Cross the bed of the stream (dry in July). In the rainy season the channel evidently carries a considerable stream. Route continues to cross the valley, bearing 250° .

miles

- 35½ **Eski Kyshla** is seen, $\frac{3}{4}$ hr. away, in the valley, bearing 125°. **Orta Kyshla** (not visible) is indicated as bearing 230°.
- 36½ Begin to ascend the rise on the W. side of the valley, the road bearing 225°.
- 37 Top of the rise. The road goes on bearing 195° for 1 mile, then turning to 235°.
- 39 The road forks, one branch going off at 315°. Route turns round to the l. The bearing is now 200°.
- 40¾ **Orta Kyshla.**

ROUTE 8 K

KELHASSAN—KATYRLY SU VALLEY, 14½ miles

- 0 **Kelhassan.** Route follows a general bearing of about 305°.
- 1¾ Pass **Inje Su Yaila**, of Kelhassan. From near this yaila route goes down a valley, with a small stream on the r.
- 6½ Pass some ruins on the l.
- 7 **Kandyl** village (Kurds) on the SW. side of the valley. (A road goes off to **Chimen** (Route 8 L). It mounts the ridge bearing 76°, reaches the top (1¼ mile), turns to 35°, and presently to 20°. Along this branch, 2 miles from Kandyl, a road goes off r. to **Chimen Yaila** and **Besh Kavak**, and **Chimen** is reached 2½ miles from Kandyl.)
- On the other side of the valley the ground rises to a hill called **Kandyl Tekke**, bearing 334° from Kandyl, about 2 miles distant. This hill is a good landmark in the undulating country to the NW., but is soon out of sight as you go S. From Kandyl the road goes on in the same direction, down the valley. Presently the valley narrows to a gorge, carrying a difficult road.

miles

10½

Route leaves the gorge, and reaches **Chatak** village, which lies on the r. bank of the stream. From Chatak the road goes on NW., down the valley of the stream, and enters the valley of the **Katyrly Su** about 3 or 4 miles away. This portion has not been traversed, and the exact point where it joins Route 8 has not been determined. Total length, **Kelhassan** to the valley of the **Katyrly Su**, about 14½ miles.

ROUTE 8 L

KÖTÜ USHAK—KATYRLY SU VALLEY, 19 miles

- Kötü Ushak**, Route runs N.
- ½ Mound and old cemetery. Route turns l. along the road coming from Yenije Oba, in the plain on the r. Forward bearing 300°.
- 4 **Küchük Besh Kavak** village. The road mounts a ridge W. of this village, passes an old cemetery, and descends into a valley on the bearing 270°.
- 5¾ **Büyük Besh Kavak** village, in the bottom of the valley. Good spring water and a few poplars. The natives indicate the bearing of Kötü Ushak as 135°. The valley runs E. and W., and is bounded on the S. by steep bluffs and on the N. by a gentle slope. The road runs N., and mounts the slope.
- 6¾ Bearing changes to 315°, and keeps this line over undulating ground.
- 10¾ **Chimen Yaila**. Besh Kavak is indicated on the bearing 155°, Kerpishli (Route 8 M) on the bearing 20°, 1½ hrs. distant. Neither is visible. Route proceeds at 290°.
- 12¼ **Chimen**, a small village in a marshy valley, which runs NE. towards Kerpishli, carrying a road. Distance, Chimen to Kerpishli, 5½ miles. Another road

miles

joins Chimen with Kandyl (see Route 8 κ, mile 7), $2\frac{1}{2}$ miles.

The road now mounts the slope on the W. of the valley and goes on NW. Hereabouts a road strikes off l. to **Chatak** (see Route 8 κ). The distance from Chimen to Chatak is $5\frac{1}{4}$ miles.

16 $\frac{1}{4}$ **Tosthair** village. From Tosthair to the point where it joins Route 8 alternative branch in the Katyrlu Su valley the road has not been traversed. It enters the valley not far from **Boghaz Kaya** village (see Route 8 m). Total length about 19 miles.

ROUTE 8 M

BULDUK—YAYJY OGHLU, about 32 $\frac{1}{2}$ miles

0 **Bulduk.** The road goes N.

1 $\frac{1}{2}$ A road goes off r.

3 Pass ruins and a cemetery. Forward bearing 350°. Route turns gradually to NW. over an undulating plateau.

6 $\frac{1}{4}$ **At Kafasy** (Angora vilayet), a small village in a hollow. From At Kafasy another road joins Route 6 at Kozanly, length 6 miles, and a road goes S. to Besh Kavak (see Route 8 L), 2 $\frac{1}{4}$ hrs.

Direction now W.

13 $\frac{1}{4}$ **Kerpishli** village, also called **Kossonun Köi**, a Kurdish village on the N. side of a valley extending to the NW. There is a supply of water from fountains, and good grass in the valley. Roads go off SW. along a valley to Chimen, $5\frac{1}{2}$ miles (see Route 8 L), and NE. over rolling country to Burun Suz, 10 miles (see Route 8 P). Kandyl is said by the natives to bear 202°, Chimen 217°, Besh Kavak (2 $\frac{1}{2}$ hrs.) 157°. At Kafasy (2 hrs.) 110°. Burun Suz 37°. Route goes on down the valley.

miles

- 15 **Modanly** village (also called **Saatly**), on the N. side of the valley.
- 18½ **Tepe Kõi**, a village lying in a glen on the S. side of the valley. Route continues down the valley, bearing 290°.
- 21 **Yeni Yapan**, a small village (see Route 8 J).
- 22 The valley ends in a rocky gorge. On the r. (N. side of the gorge) is **Boghaz Kaya Yaila**.
- 22½ **Boghaz Kaya** village at the bottom of the gorge, where it issues in the valley of the Katyrlı Su. From **Boghaz Kaya**, **Kessik Kavak** (see Route 8), lying on the high ground across the valley, just under the level of the high plateau, bears 244° about 4 miles distant. Route crosses the valley straight to **Kessik Kavak**.
- 24 Join the road going N. along the valley of the Katyrlı Su.
- 26½ **Kessik Kavak**.
 From **Kessik Kavak** to **Yayjy Oghlu**, about due W., the direct road has not been traversed. Judged from the map, the distance, over undulating plateau, is about 6 miles. The road probably coincides in part with the following road, which has been travelled over in a phaeton (time reckoning).
 Leaving **Kessik Kavak**, this route goes SW. into an upland valley, at the bottom of which lies **Haji Omar Oghlu** village (4 miles). Hence it goes nearly N. along a valley, and at 9 miles opposite a village of refugees, ½ mile to r., across the valley. At 11 miles it reaches **Haji Mussa** village, turns W., and at 14½ miles reaches **Yayjy Oghlu** (see Route 8). This road makes a long detour to the S. of the direct line.

ROUTE 8 N

KOZANLY—KATRANJY INNLER, 36½ miles

Leaving **Kozanly** the road goes a little N. of W. to **Sherefli** village. This section has not been traversed, but the country is open, and the road is no doubt good. The distance is about 7 miles. (From **Sherefli** a road goes SW. to **Kerpishli** (Route 8 M), about 6 miles.) From **Sherefli** the road goes W. to **Jihan Shah** village, about 17 miles. **Jihan Shah** lies in a valley, leading into the valley in which lies **Yayjy Chevrik** (see Route 8 J), 19 miles. From **Yayjy Chevrik**, the distance to **Katranjy Innler** is given as 5 hrs. or 17½ miles. The road now goes N. of W. down the valley, passing **Yayjy Atyk** village, 22 miles, on the N. side of the valley, **Sircha Serai** village, 26 miles, and **Kokar Kuyu** village, 30 miles, both on the S. side of the valley. A stream flows down the valley, coming from **Chekirji** (see Route 8 J). Near **Kokar Kuyu** the valley followed by the route joins the valley of the **Katyrly Su**, and the road turns N. to **Katranjy Innler**. The section **Kokar Kuyu** to **Katranjy Innler** has not been reconnoitred but it leads down an open valley, and is a frequented road.

ROUTE 8 O

KOZANLY—MODANENIN CHELTIK, 14 miles

The road from **Kozanly** (Route 6) to **Modanenin Cheltik** (Route 8 J) has not been traversed, but it crosses Route 8 P at mile 2½. It is a good road. Length about 14 miles.

ROUTE 8 P

SHAHULU—SINANLY, 6½ miles

miles

- | | |
|---|---|
| 0 | Shahulu. The road bears 227°, and mounts the rise on the W. side of the Zebiri Balia Chai valley. |
| 2 | A road joins on the l. Forward bearing 253°, over a valley. |

112 ROADS AND TRACKS—ROUTES 8 P, 8 Q, 8 R

miles

- 2½ Join a main road, running up the middle of the valley, and bearing 321° (Route 8 o).
- 3½ **Burun Suz** village. The road proceeds on the bearing 238°, mounting the rise on the W. side of the valley.
- 4½ Summit. The peak of Karaja Dagħ, behind, bears 87°; the forward bearing is 271°, gradually trending round to 285°.
- 6½ **Sinanly** village (see Route 8 j). On the bearing 10°, 1¼ mile distant, is **Sinanly Yaila**.

ROUTE 8 Q

TORUNLAR—MODANENIN CHELTİK, about 7 miles

- 0 **Torunlar**. The road goes W., rising slowly over the slope bounding the Zebiri Balia Chai valley.
 - 1½ **Kutlu Shan Jamisi**, a well-built Seljuk mosque, on the l., with a tekke near it.
 - 3½ **Abtal**, a few houses.
 - 6 Join the **Kozanly-Modanenin Cheltik** road, beside a cemetery called **Elmaly Mezarlyk**. The road hence to Cheltik has not been measured, but the distance from **Kutlu Shan Jamisi** to **Cheltik** is given as 1 hr.; so Cheltik must be quite near Elmaly Mezarlyk.
- From **Burun Suz** (see Route 8 j) to **Elmaly Mezarlyk**, along the road to Cheltik, is 2½ miles.

ROUTE 8 R

PALTA IN—GÖK GÖZ, about 5 miles

A road goes from **Palta In** (Route 6) to **Gök Göz** (Route 8 j). It leaves **Palta In** bearing 290°, and the distance was given as 1½ hrs. It has not been traversed.

ROUTE 9

YAPAN HAMMAM—ANGORA, 34 $\frac{1}{4}$ miles

miles

- 0 Leaving **Yapan Hammam** the road goes northwards down a fertile valley.
- 3 **Kady Kõi** village, among willows and poplars. The road now turns NE., passes between two knolls, and mounts a valley.
- 7 **Kara Omerli** village, on the NW. side of the valley. Route now goes due E., still in the valley for 1 $\frac{1}{2}$ miles, then turns NE.
- 8 Pass a hill l. and a fountain r. On the hill are the ruins of an ancient fort called **Giaur Kalesi**, commanding the valley, now narrowed to a gorge. About a mile SW. of this point is **Dere Kõi**, a village on the N. bank of a small stream. Six minutes from **Dere Kõi**, on the opposite side of the stream, there is another ancient fort commanding an alternative branch of the road to Angora. From **Giaur Kalesi** the road goes slightly N. of E.
- 10 **Oyaja**, a small village. The road turns NE. over a plateau, sloping slightly towards the S. and bounded by a high ridge on the E., whence the traveller gets his first view of the **Mohan Göl**. Descent after some distance.
- 15 $\frac{3}{4}$ **Topakly**, a village lying in a hollow with rolling ground beyond.
- 19 $\frac{1}{4}$ **Haji Muradly** village 1 mile l. of the road.
- 21 **Yavrujyk** village opposite on r. of road.
- 22 **Deli Hümmethi** village opposite, lying about 1 hr. up the hills on the l.
- 25 The alternative road from **Giaur Kalesi** comes in.
- 26 $\frac{3}{4}$ Pass **Hajilar** village. Route lies now between a long ridge on the l. and the **Mohan Göl** to r. Presently it begins to mount the hills bounding the Angora valley on the S.

miles

31 Summit of the ridge. Road now follows Route 6.
39 **Angora.**

An alternative route from **Oyaja** to **Angora** was traversed by a French traveller in 1861. We give the following details :

0 **Oyaja** village. Road goes N.

4½ Fountain to l. Route turns NW.

6 **Chayrly** village, lying between two knolls N. and S. Road now rises over a bare uncultivated plateau, turns NE., and descends into a valley.

11 **Alashly** village.

The road now turns NW. down the valley, passes near the source of a brook flowing NW., mounts the ridge on the l., descends into another valley with a stream flowing SW., and crosses the stream.

15 **Assarly Kaya** village. On the slopes above the village are oaks, and hazel trees grow among the houses. Rich vegetation. On a hill to the N. stands an ancient fort. Route now goes NE. up the valley, turns N. over a plateau, and then NW. down the side of a stream to **Balyk Koyunjy** village, lying below a rocky escarpment on the S. N. of the village, about 1½ miles, stands a hill, **Korkabader Kaya**; the stream flowing past Balyk Koyunjy goes on W. and joins another stream which comes round the NW. side of the hill. The road now goes NE. along the valley.

18¾ Cross the second stream.

20¼ Pass a fountain, and rise over a plateau.

22½ Second fountain. Route then descends into the valley in which Alajatly lies. It crosses a stream flowing NW. along this valley.

24½ **Alajatly**, a small village. Route now crosses a ridge on the NE., traverses a treeless plateau with rolling undulations and yellow soil, and passes several fountains and brooks.

34½ **Angora.**

ROUTE 10

AK SHEHIR—SIVRI HISSAR and the ANGORA RAILWAY

Traversed in a phaeton from Ak Shehir to Piribeyli. A good road, going NE. over level plain for 20 miles, then N. through level valleys between hills for 25 miles, then N. over rolling plain for $22\frac{1}{2}$ miles to the Sakaria and Günüsü Dagħ, where it strikes NW. over the foothills to Sivri Hissar ($19\frac{1}{2}$ miles).

An alternative road from Ak Shehir to Hairer Khan goes by Karabulut village and Dikili village, joining the other road before reaching Hairer Khan.

An alternative road from Tuzlukjy to Piribeyli, passing far to the E., is detailed below.

From Sivri Hissar, there are roads to several stations on the Angora railway. The distances depend on time-reckoning.

miles

- | | |
|-----------------|--|
| 0 | Ak Shehir town. The road crosses the Anatolian railway E. of the station, and goes NE. over a level fertile plain. |
| 5 $\frac{1}{4}$ | Melles Kõi village. |
| 7 | Kurd Kõi village. |
| 14 | Tuzlukjy village. Hence Orta Kõi is visible, 2 hrs. distant, bearing 276° . A road goes off r. to the Baghyrsak Pass (see below). |
| 20 | The road begins to rise out of the level plain, and enters a pass between the hills on the r. and the lake on the l. Ak Shehir bears 217° . In front there is a plain, which is a northward extension of the valley of Paroreios, round the NE. corner of the lake. |
| 21 | Hairer Khan , a roadside inn, with a police station and a good fountain close by. Close to Hairer Khan, a valley runs back into the hills on the r., at the head of which lies a small Yürük village, Mermutlu (or Mevilitli?), 1 mile from Hairer Khan. The natives here give the time to Ak Shehir as 7 hours. |

From Hairer Khan the road goes N., keeping near

miles

the marshes on the border of the lake, and crosses the plain on the bearing 5°. About mile 27, Route 10 c (alternative) goes off to r.

31 Enters a pass over a ridge. Here the forward bearing is about 357°. The road crosses the pass.

32 Enters a level plain.

32½ Road crosses Route 11 c from Yavashly to Karapunar. In the middle of the plain a road goes off r. to **Aghyz Achyk** village, on the hillside to the N.

40 **Ören Kõi** village. **Karghaly** village bears 210°, 2½ hrs. distant, over the plain.

43 The road passes ancient ruins, called **Samut**, with a good fountain.

45 **Ashagha Piribeyli**, a large village with good water from fountains.

From Piribeyli a road goes nearly due N. to Fethoglu Köprü, a bridge over the Sakaria. This road is shown on the maps as depending on native report, and there is no record of its having been travelled over. It goes over open flat country, and probably offers no difficulties. Its length is about 22½ miles.

67½ **Fethoglu Köprü**, a bridge over the **Sakaria** river (no details). Just before arriving at the bridge the road passes near **Tatar Kõi** village on the r. On the N. side of the stream is **Balykdamy Chiftlik**, and a little farther W. **Haji Kalé** village. From Fethoglu Köprü, the road goes NW. at the foot of the lower spurs of Mount Dindymos along the l. bank of a tributary of the Sakaria, crossing several small streams.

78 **Bala Hissar** village, close to the site of the ancient Pessinus. Road now crosses an outlying spur of Dindymus, which rises to a height of 400 ft. above Balahissar, descends into the valley of a stream flowing SW., with three small villages, **Teke Viren**,

miles

Siliba Kõi, and **Haidar Kavak**, farther up the valley on the r., passes a hill, the **Ada Dagh** l., and crosses some brooks flowing SW.

87

Sivri Hissar.

ALTERNATIVE ROAD, TUZLUKJY—PIRIBEYLI

This road makes a long détour to the E. The first section, Tuzlukjy to Kurshunlu, has been crossed on horseback, and the distances depend on time-reckoning; the remainder has been measured in a phaeton.

miles

0

Leaving **Tuzlukjy** village, road crosses the plain.

5 $\frac{3}{4}$

Reaches the foot of the hills. An easy path crosses the ridge by a pass called **Baghyrsak Dere**, reaching the summit at mile 9 $\frac{3}{4}$.

14 $\frac{3}{4}$

The foot of the pass on the N. side. From the summit of the **Baghyrsak Dere** an extensive view is obtained over the plain to the N. and E., extending as far as the **Günüsü Dagh** and the rolling wilderness of the **Haimane** on the N., and the **Ala Dagh** (reckoned 9 hrs. from the edge of the plain beneath) on the E. On the NW. the view is closed by the **Bayat Kolu** and **Kurshunlu Dagh**, which screen from sight the plain stretching from **Piribeyli** to the **Sakaria**. At the foot of **Baghyrsak Dere** there is a valley about 3 miles broad, which widens out towards the NE. to merge in the central plain. Road keeps along the eastern side of this valley.

18

Kurshunlu village, lying on the hillside E. of the valley. Road now strikes obliquely over the valley, forward bearing 344°.

19 $\frac{1}{2}$

Cross Route 10 c from **Kolu Kissa** to **Ak Shehir**. **Harranlar** village lies on the hillside 1 mile to the NE. Hence across the open, flat valley.

27 $\frac{3}{4}$

Yavashly village. (About midway between **Harranlar** and **Yavashly** a dry torrent bed was crossed; the

miles

banks were steep and the phaeton had to follow them for some distance before a crossing could be found.) Yavashly lies S. of the Kurshunlu Dagħ, about $1\frac{1}{2}$ miles from its base. Kurshunlu bears 164° , Harranlar 158° , and the highest point of Kurshunlu Dagħ 345° , all visible. From Yavashly the road skirts the eastern foothills of Kurshunlu Dagħ, bearing about 20° .

34 $\frac{3}{4}$ **Bügürü Delik** village, on the eastern slope of the hills. Hence road is a hill-road going NW.

38 **Üch Kuyu** village, direction hence nearly W.

40 $\frac{1}{2}$ **Giaur Ushaghy** or **Meshelek**. Road is now in an upland valley formed by the northern slopes of Kurshunlu Dagħ and Bayat Kolu, and of a long ridge to the N., called Seifi Ören. Road turns N.

43 $\frac{3}{4}$ **Kurd Ushaghy** village. Hence direction is W.

48 $\frac{3}{4}$ **Yokary Piribeyli**, at the head of a valley which runs westwards, followed by the road.

50 $\frac{3}{4}$ **Ashagha Piribeyli**.

From Sivri Hissar, apart from the main road to Eski Shehir, (Route 14), there are roads to the following stations on the Eski Shehir—Angora Railway: **Beylik Akhyr**, **Sary Kõi**, **Bicher**, **Saghzylyar**, and **Beylik Köprü**. The railway from Beylik Akhyr to Beylik Köprü may be said to resemble roughly an arc of a circle drawn round Sivri Hissar, and the roads from Sivri Hissar to those stations form radii of the circle. There is little detailed information about these roads, which must all be frequently used; but a general description of the country between the railway and Sivri Hissar from the pen of a good observer on the spot will make the general conditions clear.

The railway, coming from Eski Shehir descends the valley of the Porsuk Su to the point where the latter joins the Sakaria, a few miles E. of Saghzylyar station. It then turns S. up the valley of the Sakaria, passes Beylik Köprü station and two miles farther on bends sharply round to the E., and proceeds towards Angora.

The valley of the Porsuk Su from Beylik Akhyr to its junction with the Sakaria is mainly either marsh or waste. On the S. it is bounded by a ridge of hills, high in the centre where the river makes a bend to the N. (from above Sary Kõi to Bicher) and gradually sinking on either side, especially on the E., where they merge into the slightly undulating, waste table-land, which fills the corner between the two rivers. The southern slopes of this ridge roll down to a long valley (running roughly westwards from Mülk) which rises more sharply up to the slopes of the Günüsü Dag (Mount Dindymos) on the S. Along this valley ran the Roman road from Eski Shehir to Angora. The valley is drained by a stream called the Mülk Su, and its tributaries, flowing NE. to join the Porsuk Su. Sivri Hissar lies on the western slope of the Günüsü Dag, which is a massive and imposing ridge running S. for 12 miles and then bending to the E. Its southern and western slopes are bare, but the country lying in the angle to the NE. is fertile and well-watered, covered with villages surrounded by trees and gardens.

Such is the country over which the roads from Sivri Hissar to the railway radiate.

The roads from Sivri Hissar eastwards to the Sakaria have a mean downward gradient of about 1,100 ft. in 29 miles, or 1/140.

The following roads are reported to exist :

I. A road from **Sivri Hissar** to **Beylik Akhyr** station, passing through **Okju** village and **Halil Bagh** village. There are no details regarding this road, which depends on native report. It goes over hilly country. Length about 24 miles.

II. A road from **Sivri Hissar** to **Dümrek**, whence roads go to **Sary Kõi** station and **Bicher** station. The road from Sivri Hissar to Bicher station has been traversed by an English traveller on horseback. The following is his route and the times taken :

The road goes NE. from Sivri Hissar to **Eljik** village, 1 hr. 35 min. It then turns E. down the valley of the **Pirlek Su** to **Masud Chiftlik**, a farm on the l. bank ($\frac{1}{2}$ hr.). (**Babadat**

village lies $\frac{1}{2}$ hr. E. farther down the stream.) From **Masud Chiftlik** the road goes N. to **Dümrek** village (over $\frac{1}{2}$ hr.). It now turns NE. to **Idejik** village (51 min.), and hence in the same direction to **Karadat** village (55 min.). Soon after **Karadat** it turns N., and reaches **Bicher** in $1\frac{3}{4}$ hrs. Total length about 21 miles, over a waste undulating plateau.

An alternative road from **Sivri Hissar** to **Bicher**, coinciding in part with the above road, has been traversed and measured in a phaeton :

Leaving **Sivri Hissar** it takes the road going to **Hortu** village (see III, below) for 4 miles, and then turns N. to **Babadat** village ($9\frac{1}{4}$ miles). Hence it goes N. to **Koch Agha** village ($14\frac{1}{4}$ miles), and thence via **Karadat** village ($18\frac{3}{4}$ miles) to **Bicher** station, $23\frac{3}{4}$ miles.

A chaussée has been planned from **Sivri Hissar** to **Bicher**, going via **Memek** village, but no information is available as to its completion. (Meyer's *Reisebuch*, p. 343, and map, p. 339.)

From **Sivri Hissar** to **Dümrek** the telegraph from **Sivri Hissar** to **Sary Köi** follows the above road. From **Dümrek** to **Sary Köi**, a good authority shows two roads, one passing on either side of a height called **Kara Cham**, N. of **Dümrek**. The western road passes through **Belen** village, and the telegraph continues along this road. The eastern road goes through **Kysyl Cheshme** village, whence a branch goes off NE. to **Bozan**, where it joins the road along the railway NE. of **Sary Köi**. Both roads from **Dümrek** to **Sary Köi** are about 9 miles long. Total distance, **Sivri Hissar** to **Sary Köi** station, $18\frac{1}{4}$ miles. (The distance on horseback is given as 5 hrs.)

III. A road runs from **Sivri Hissar** to **Saghzylyar** station.

Leaving **Sivri Hissar**, it goes SE. to round the lofty crags above the town and then turns NE. over the broad top of the mountain. Presently it enters a fertile river valley which it descends in a NE. direction, with the stream on the l. to **Hortu** (**Ordu**?) village (9 miles). Continuing down the valley, it reaches **Mülk** village ($14\frac{1}{2}$ miles), on the l. bank. On the opposite bank lies a village **Oglakjy**. From **Mülk**

there is a good view up and down the valley, which is from 200 to 300 ft. deep and about 1,000 yds. wide, and well supplied with fruit trees, especially apricot. The ground on either side is undulating table-land. Two miles below Mülk, the valley of the Mülk Su turns N., and the road, after passing **Demirji Köi** on the r. (16 miles), strikes NE. over gently rolling country to the railway. Crossing the railway 2 miles W. of Saghzylyar station, it joins the road along the railway and at $28\frac{1}{2}$ miles reaches **Saghzylyar** station.

IV. A road runs from **Sivri Hissar** to **Beylik Köprü** station. It coincides with the last as far as **Demirji Köi** (16 miles), crosses a valley 2 or 3 miles broad and then goes a little N. of E. over perfectly level table-land to **Beylik Köprü**, a bridge over the **Sakaria**, here a deep narrow stream, winding lazily away to the N. along the eastern edge of a marshy plain, covered with reeds. The station is 1 mile N. of the bridge, on the l. (western) bank of the river (29 miles).

LATERAL COMMUNICATION BETWEEN ROUTE 8 WITH ROUTE 9 AND ROUTE 10

Obstacles to traffic in this area are the lakes N. of Ilghin, the hills E. of Ak Shehir Lake, the hills SE. of Piribeyli, and the **Günüsü Dag**. The following roads establishing lateral touch between the two routes have been travelled over, wholly or in part:

ROUTE 10 A

AK SHEHIR—SERAI ÖNÜ *via* DOGHAN HISSAR,
 $81\frac{1}{2}$ miles.

From Engilli to Doghan Hissar, the record depends partly on the sketch-map of an American traveller who did the journey on horseback, partly on trocheameter readings taken on a phaeton. It is highly probable that this section is passable for wheeled traffic throughout. It crosses a succession of rounded spurs, separated by valleys. The remainder of the

route has been measured in a phaeton. Water is good and plentiful everywhere.

miles

- 0 Leaving Ak Shehir by the road to the station, route turns r. near the main cemetery, and takes the Ak Shehir-Örkenez chaussée (Route 26) which runs SE.
- 3 Pass the prosperous Greek village of **Permata** r.
- 5 **Engilli** village, which lies at the foot of a pass over the Sultan Dagħ. The chaussée turns SW. over this pass, and present route continues SE., round a spur.
- 7 **Ellevrez** village. Hence over a succession of spurs and *deres*.
- 10 **Chakyrklar** village. (An alternative road from Ellevrez to Chakyrklar bears 145° to **Bisse**, 3½ miles. The road from Bisse joins the direct road at right angles ½ mile from Bisseh and 1 mile NW. of Chakyrklar. Bisse is the first point coming E. from Ak Shehir, which is not infested by mosquitoes. It lies well up the slope, and between it and the level plain S. of Ak Shehir Göl there is a low flat ridge which shuts off the view of the villages at the foot of the spurs. It has many fountains of good water, and is buried among trees which hide it from the direct road from Ellevrez to Chakyrklar.)
- 12 **Ökez** village.
- 14 **Ellesler** village.
- 16 **Kara Agha** village.
- 18¼ **Chetme** village.
- 21¼ **Dogħan Hissar**, a small town.

(The total time taken from Engilli to Dogħan Hissar* was 5 hrs. 5 min. An alternative road from Engilli to Dogħan Hissar is recorded. It took 4 hrs. 41 min., although it makes a considerable détour. The reason given for the difference in time is that the straight road leads over spurs and valleys, while the alternative road goes round over level plain. Leaving **Engilli**, it

miles

passes through **Aghayüt, Reïs, Orta Köi, Kochash, Yazyr**, and joins the direct road at **Chetme**. Parts of the alternative route have been traversed in a phaeton.

A few details are given :

Engilli to **Gedil**, $2\frac{1}{2}$ miles, about due E. The distance from **Gedil** to **Ellevrez**, on the direct road, is $2\frac{3}{4}$ miles. From **Gedil** to **Reïs**, $3\frac{1}{4}$ miles, bearing ESE. **Reïs** to **Orta Köi**, $1\frac{3}{4}$ miles, bearing 109° . From **Reïs** to **Chakyrklar**, on the direct road, the bearing is 231° , the distance just over 3 miles. **Orta Köi** to **Kochash** the distance is $3\frac{1}{2}$ miles by a very bad road, which coincides for the last portion with the stream flowing through **Kochash** to the plain : the bearing 145° . From **Kochash** the road goes towards **Silint**, $2\frac{1}{2}$ miles distant, bearing 250° , for 1 mile, and then turns to the bearing 160° , reaching **Yazyr**, $2\frac{1}{4}$ miles from **Kochash**. The bearing from **Kochash** to **Yazyr** is 200° . From **Yazyr** to **Chetme** is $3\frac{1}{2}$ miles, nearly due S.

Total distance, **Engilli** to **Doghan Hissar**, $19\frac{3}{4}$ miles.)

From **Doghan Hissar**, the road goes E.

26 $\frac{1}{4}$ **Ayaslar** village, in a valley running back into the **Sultan Dagħ**. The bearing to **Urus Köi** is 41° .

28 $\frac{1}{2}$ **Urus Köi** village. The bearing hence to **Balky** (not visible) is indicated as 97° .

32 $\frac{1}{2}$ **Balky** village. Hence a cart road goes to **Konia** (Route 23). **Balky** is on the r. bank of a fair stream flowing N. Road goes down the valley of the stream.

35 $\frac{1}{4}$ **Gechid** village, which was indicated as bearing 20° from **Balky**.

37 $\frac{1}{4}$ **Közdere** village, indicated as bearing 25° from **Gechid**. Before entering **Közdere**, road crosses the stream, r. to l. bank, by a stone ? bridge, then proceeds down the l. bank for $4\frac{1}{4}$ miles, turns sharp S., and crosses the stream.

43 $\frac{3}{4}$ **Kutun** village. Hence road goes due E.

miles.

46½ **Buljyk** village, lying well up a wide and fertile valley stretching N. on a line slightly E. of Ilghin, which is about 5 miles distant. The road goes northwards down this valley for 1½ miles, and then turns to the bearing 125°, and goes straight to Eldesh.

50½ **Eldesh** village. Sardu Kõi (Route 24) and Aghalan villages, in the plain, bear 7° from Eldesh. The forward bearing is now 82°.

51½ **Mahmud Assar** village is seen, about 2 miles distant, in a valley on the r., bearing 123°.

53½ Road passes the ruins of a Turkish village, trends more to the N., and approach Ghaziler on the bearing 38°.

56½ **Ghaziler**, a village of Circassian refugees. Eldesh (visible) bears 261°. Road now proceeds on the bearing 25°.

60 **Koili Tolu**, a new Turkish village. Forward bearing 95°.

62½ Road passes **Tosun Oghlu** yaila, ¼ mile to l., and another yaila, 1¼ miles away, also to l.

66½ **Kadyn Khan** village. Hence by Route 21, via Ladik.

81½ **Serai Öntü**.

(There is a shorter road, leading to Serai Önü, without touching Ladik, and cutting off 4 or 5 miles.)

ROUTE 10 B

ROADS ALONG THE RAILWAY FROM AK SHEHIR TO SERAI ÖNÜ

All along the Anatolian Railway from Ak Shehir to Kadyn Khan, which touches the chaussée E. of Ilghin, but elsewhere keeps considerably to the N. of it, there run one or more roads, normally practicable for wheeled traffic. Starting from Ak Shehir, these roads run over level plain to a point not far

W. of Azary Kõi village, where they become involved in the low range of hills mentioned on Route 21, mile 81. This range is only a gentle rise in the ground: the railway winds over it by an easy pass, the highest point of which, 6 miles E. of Azary Kõi, is 397 ft. above Ak Shehir station and 193 ft. above Ilghin station. From this point the ground slopes gently down to Chaushjy Kõi station, which is only 43 ft. higher than Ilghin station. Between Chaushjy Kõi station and Ilghin, there are two commonly used roads, both of which have been crossed in a phaeton. One keeps close to the railway, along the western border of the lake, the other crosses the high ground W. of the lake. A third road, shown on the maps as passing between the lake and its marshy extension on the N., was reported in the summer of 1912 to be impassable. East of Ilghin, the chaussée (Route 21) keeps close to the railway for $5\frac{1}{2}$ miles. From this point (mile $53\frac{1}{2}$), where the chaussée leaves the railway to mount a rise on the E., a road accompanies the railway NE. through a narrow defile, where it was commanded at an early period by a remarkable Hittite fort on the high ground S. of the road. This fort is built of rectangular blocks, some of them 10 by 2 by 6 ft. It stands rather less than $1\frac{1}{2}$ miles W. of Kara Kõi, which is beside km. 333 on the railway. Just E. of the fort the ravine turns N., carrying the road to Atlandy and Kolu Kissa (Route 10 c). From this point to Kadyn Khan station, the terrain consists of low undulations, and the roads link up with several villages and yailas, some of them new settlements of Mohajirs.

These roads, which the railway has created or developed, are grouped together, and no attempt is made to disentangle them into regular itineraries. The distance from point to point varies with the road taken. In this section the railway winds considerably; sometimes the traveller will follow it, sometimes he will leave it to cut off an angle. The total distance along the railway from Ak Shehir station to Kadyn Khan station is $52\frac{3}{4}$ miles (for details see p. 65). The principal places along the railway are Azary Kõi village,

1 mile NE. of the station, **Chaushjy Kõi** village, among marshes $2\frac{1}{2}$ miles E. of the station, **Ighin** town (Route 21), and **Kara Kõi** village, beside km. 333 on the railway (measured from Eski Shehir), and 9.6 km. W. of Kadyr Khan station.

ROUTE 10 C

KOLU KISSA—HAIRET KHAN, $54\frac{1}{4}$ miles

A road goes from Kolu Kissa (Route 8) to Hairet Khan (Route 10) via Chaushjy Kõi. It has been crossed in a phaeton, and is easy all the way. It crosses hilly country between Chaushjy Kõi and Hairet Khan.

miles

- | | |
|-----------------|--|
| 0 | Kolu Kissa. The road goes over level plain. |
| $8\frac{1}{2}$ | Atlandy village, which is visible from Kolu Kissa, bearing 226° . On the l., to the E. of these two villages, a stream runs N. Road still along the l. bank of the stream. |
| $11\frac{3}{4}$ | Mohammedie , a village of Circassians. Atlandy is visible, bearing 55° ; the escarpment S. of Ladik bears 146° . Road now ascends a valley, going roughly southwards with the stream still on the l. between a double outcrop of stratified limestone l. and the Emir Dagħ r. |
| $13\frac{1}{4}$ | The Emir Dagħ turns sharply westwards, and road is now in a broad plain, bounded on the l. by the limestone outcrop. |
| $14\frac{3}{4}$ | Duyer village is opposite, to the l., just under the limestone ridge across the stream. Road goes on in the same direction, on the l. bank of the stream. |
| $18\frac{3}{4}$ | Road crosses the stream by a stone bridge, Kadyr Oghlu Köprü , and goes round a hill to the E. to cross the Anatolian railway beside km. 333 (measured from Eski Shehir). |
| $19\frac{3}{4}$ | Kara Kõi village. From Kara Kõi the road goes W., and enters a pass, along with the railway. |

miles

21 $\frac{1}{4}$ Road passes, on the l., a remarkable ruined Hittite fort, which commanded the pass. The fort controlled the point where the road from Atlandy joined the road from Kadyň Khan (Route 21) in the Hittite period. At this point the present road runs S. of the railway; across the railway, in the pass, is **Kale Kõi**, a small village.

21 $\frac{3}{4}$ Cross the **Balasan Su** stream, join the chaussée, and proceed as in Route 21 to Ilghin.

27 $\frac{1}{4}$ **Ilghin**. Hence road goes W. over the plain for about 3 miles, then turns N., passing between the hilly ground on the l. and the lake on the r., with the railway close at hand, on the r.

35 $\frac{3}{4}$ Cross the railway.

37 $\frac{1}{2}$ **Chaushjy Kõi**, a large village, with marshes N. and E. (From the village to **Chaushjy Kõi** station the road goes SW., along the railway, for 2 $\frac{1}{2}$ miles.) Present route follows the road to the station for $\frac{1}{2}$ mile and then turns off r. by a road which goes W. over the plain.

39 $\frac{3}{4}$ Road begins to rise over the plateau, and goes over hilly country to Gundulu.

44 $\frac{3}{4}$ **Gundulu**, a village of Circassians. Korashly (see below) is indicated as bearing 323°. Road bears 300° for a long distance.

53 $\frac{1}{2}$ The road divides; route follows the branch going NW. The other branch goes off towards the plain of Ak Shehir.

55 $\frac{1}{4}$ **Hairet Khan**, on Route 10.

(There is an alternative road from **Hairet Khan** to **Gundulu** via **Korashly**. Leaving **Hairet Khan**, and passing S. of **Mermudlu Kõi** route goes eastwards round the hill, and at 2 $\frac{1}{2}$ miles takes a road forking to the r. and bearing 115°. This road ascends a valley, and at 4 $\frac{1}{4}$ miles reaches **Korashly**. At **Korashly**, **Göz**

miles

Ören (see below) is indicated as bearing 27° . A horse track to Göz Ören takes 3 hrs.; the cart road, 4 hrs. From Korashly to **Gundulu** ($12\frac{1}{4}$ miles) there is only a horse path).

An alternative route between Kolu Kissa and Hairer Khan is thus described in the reverse direction:

From a point about 3 miles N. of **Hairer Khan**, a road goes to the Durgut Ova, and hence to Kolu Kissa, Zebir, and the Salt Lake. It is used by the salt caravans, and is a good road.

Leaving the Ak Shehir—Piribeyli road about mile 27, the road goes eastwards round the base of the hills, to **Göz Ören** village, about $8\frac{1}{2}$ miles. Göz Ören is situated on the S. side of the valley called **Eshme Ova**, lying between the hills on the S. and the Bayat Kolu and Kurshunlu Dagħ on the N. Route 11 c crosses the north side of this valley. From Göz Ören, the road goes E. for $\frac{1}{2}$ hr. and then SSE. for 1 hr., keeping close to the hills on the r., and giving a view over a limitless plain on the l., to **Durgut** village ($16\frac{1}{4}$ miles) situated at the foot of the hills, with an eastern exposure. At $19\frac{3}{4}$ miles route crosses the road from Kurshunlu (S.) to Harranlar (N.), two villages lying each about 1 mile distant, on the western side of a low range of hills (see Route 10, alternative branch). The road crosses those hills and goes over level plain to **Kolu Kissa** (estimated distance, $42\frac{3}{4}$ miles). The last 23 miles have not been traversed.

ROUTE 10 D

ALI BEY YAILA—CHAUSHJY KÖI, $50\frac{1}{4}$ miles

miles

- | | |
|---|--|
| 0 | Leaving Ali Bey Yaila , the road goes SW. to a pass over the Ala Dagħ, near its southern end. |
| 5 | Top of the pass. Sary Kaya village, 1 hr. NW. of Ali Bey Yaila, bears 350° ; the forward bearing as far as Bash Kuyu (visible) is 205° . |

miles

6 $\frac{3}{4}$

Bash Kuyu village. From Bash Kuyu the general direction is SSW. From a point about 3 hrs. from Bash Kuyu, the reading backwards is 20°, and the Ala Dagħ extends between 5° and 30°. Close to the road, on the r., there is a small hill called **Jebel Dagħ**, forming a good landmark in the surrounding plain, which extends for miles in every direction. From a point 20 mins. farther on, on the rising ground beside the Jebel Dagħ, Kolu Kissa bears 120°, 2 $\frac{1}{2}$ or 3 hrs. distant, Atlandy bears 185°, 4 hrs. distant, both visible. Two hrs. farther on, the backward bearing is 10°, Atlandy bears 160°, about 1 hr. (?) distant, the forward bearing to the pass over the Emir Dagħ is 239°. Road crosses this pass (said to be 1 $\frac{1}{2}$ hrs. from Dere Kõi below) and a view opens over a valley to a second pass leading out of it, $\frac{1}{2}$ hr. distant, bearing 285°. In the valley, on the left, $\frac{1}{2}$ hr. distant and bearing 225° is a village **Avdan**, another village **Choghut** lies 20 min. SSE. of Avdan. The road goes on to Dere Kõi, on the slopes of the hills running down to the marshes N. of Chaushjy Kõi. The measured distance from Bash Kuyu to Dere Kõi is exactly 30 miles.

Dere Kõi, village, in a ravine running down to the marshes. Hence road goes down the slope.

39 $\frac{1}{4}$

Musafirli, a village in the plain near the marshes. The natives here report that there is no direct road between the marshes and Chaushjy Lake to Chaushjy Kõi, and route turns N. to go round the marshes.

40 $\frac{3}{4}$

Tekeler village, on the high ground on the r. Road now turns W.

44 $\frac{3}{4}$

Haremi village, at the NW. corner of the marshes. Hence road goes S., along the W. edge of the marshes.

50 $\frac{1}{4}$

Chaushjy Kõi.

ROUTE 10 E

KOLU KISSA—CHELTİK, 45 miles

This road is known to exist, and can offer no obstacle to wheeled traffic, but there is no record of any traveller having traversed it. It strikes NW. from **Kolu Kissa** across the central plain to the **Ak Göl** and **Cheltik**. This road was used by sheep-drovers from Cappadocia to Constantinople in pre-railway days, which implies that water and grass are found at intervals along it. A drover at Cheltik in 1883 gave the following details of his stages :

Kolu Kissa to **Kara Göz**, 6 hrs.

Kara Göz to **Ak Göl**, 2½ hrs.

Ak Göl to **Cheltik**, 3 hrs.

Göz (' Eye ') is a common Turkish name for a spring, and probably means a spring here ; but **Kara Göz** has never been visited by a European. Total distance, about 45 miles.

The villages on the SW. side of the **Ak Göl** must lie on or near this route. They have been visited by an English traveller who gives the following details : **Haji Fakyr**, 1 hr. S. of the lake ; hence to **Oda Bashy**, beside the lake 1 hr. 35 min. ; hence along the lake to **Küçük Hassan** 50 min. ; hence to **Cheltik** 1 hr. 25 mins. (See Route 10 I). The lake bears 137° from Cheltik.

ROUTE 10 F

SARY KAYA—AK SHEHIR, *via* Göz ÖREN, 63 miles

This route was reported to exist, but the section **Sary Kaya—Göz Ören** has not been traversed. It coincides with Route 10 c (alternative route) from **Göz Ören** to **Hairet Khan**, and with Route 10 from **Hairet Khan** to **Ak Shehir**. The total distance was given as 18 hrs., or about 63 miles.

ROUTE 10 G

SARY KAYA—PIRIBEYLI, 42 miles

Reported to exist, but traversed only in part. Leaving Sary Kaya, the road goes NW. to **Haji Mehmet Yaila** $6\frac{1}{2}$ miles, and hence to **Haji Mustafa Yaila** $8\frac{1}{2}$ miles. Hence Sary Kaya was indicated as bearing 150° , Oda Bashy (3 hrs. distant) as bearing 295° . The road was reported to go on through **Serai Kõi** to **Oda Bashy**, and thence by **Küçük Hassan** (see Route 10 c) to **Piribeyli**. The total distance was given as 12 hrs. or 42 miles.

ROUTE 10 H

CHARBASHLY YAILA—SAKUSHAGH, 14 miles

Reported to exist. Sakushagh was indicated as bearing 270° from Charbashly, and the road was said to go by **Suleiman Agha Pirim Oghlu Yaila** (2 hrs.) to **Sakushagh** (4 hrs.), about 14 miles.

ROUTE 10 I

SHUSHAGH YAILA—PIRIBEYLI, $46\frac{1}{2}$ miles

This road makes a *détour* to the N. of the direct line. It was traversed and measured in a phaeton. It crosses gently rolling uplands.

miles

- | | |
|----------------|---|
| 0 | Leaving Shushagh Yaila road bears 310° for 1 mile, and then turns to the bearing 285° as far as Sinanly Yaila . |
| $1\frac{3}{4}$ | Sinanly Yaila . Hence road goes due W. |
| $2\frac{1}{2}$ | Here a road goes off r. Forward bearing 250° . |
| $3\frac{1}{2}$ | The forward bearing is 295° . |
| $5\frac{3}{4}$ | The forward bearing, which points straight to the highest ridge of Günüsü Dag h, is 316° . |

miles

8 $\frac{1}{4}$

The forward bearing is 308°.

11

A road goes off l. Günüsü Dagħ bears 320°.

14 $\frac{3}{4}$

Yusuk Bashy Yaila. Usumbey bears 325°, 1 hr. distant, and Sinanlı 333°, about 2 hrs. distant. Near Yusuk Bashy Yaila there is a mill driven by a fine stream. This place is in the vilayet of Konia. Road now crosses the stream, called **Devegechid Su**, and follows its bank.

17 $\frac{1}{4}$

Yusuk Bashy, a picturesque village lying in a round depression at the head of a dere (whence its name 'Ring Head'), and well watered by copious springs which form a marsh at the lower end of the village, and issue in a stream which flows away N. to join the Sakaria, $\frac{1}{4}$ mile N. of Chakmak. Hence the general direction is WSW.

19

A road crosses at right angles.

21 $\frac{3}{4}$

A road goes off l.

26 $\frac{1}{2}$

The road forks. Present route takes the branch to the l. at 260°. Presently a road crosses, going to **Kasym Oghlu Yaila** on the left, which bears 225°. Direction now W.

32 $\frac{1}{2}$

Cheltik, a large village with shops and a pretentious domed mosque. Road now goes SW. over flat country.

37 $\frac{1}{4}$

Cross an important road bearing 335°. Forward bearing is 250°.

38 $\frac{1}{4}$

Pass ruins and a cemetery, with a road joining on the l. About 2 $\frac{1}{2}$ miles distant, bearing 30·5°, a village can be seen. Günüsü Dagħ bears 8°.

38 $\frac{3}{4}$

The road forks. Present route takes the left branch, bearing 230°.

41 $\frac{1}{4}$

A road crosses, bearing SE. and NW. Presently two roads go off r.

42

A road joins on the r.

42 $\frac{1}{4}$

A second, and larger road joins on the r.

42 $\frac{3}{4}$

A road crosses, going S. Route turns S. along it.

miles	
44 $\frac{3}{4}$	Yokary Piribeyli. Hence, as in Route 10 (alternative).
46 $\frac{3}{4}$	Ashagha Piribeyli.

ROUTE 10 J

CHELTIK—KATRANJY INNLER, 33 miles.

This road was traversed by an English traveller on horseback. It goes over open undulating country, and is probably practicable for wheeled traffic throughout. General direction NE. Total length about 33 miles.

From **Cheltik** the road goes NE. to **Gök Punar** village (4 $\frac{1}{2}$ miles). Here a fine spring rises and flows past Renk Oghlu (1 $\frac{1}{2}$ mile to the N.), pouring a large volume of water into the Sakaria near Elles Pasha Köi, 3 hrs. from Cheltik. This stream was unfordable 1 hr. above its mouth at the end of July 1898. Hence NE. to Usumbey (12 $\frac{1}{2}$ miles), on the l. bank of a considerable stream coming from Yusuk Bashy (Route 10 I). The road turns more to the N., and passing near **Sinanly** village (15 $\frac{1}{2}$ miles) it goes on to **Kurd Tahajyr** village (22 $\frac{1}{2}$ miles), in the valley of a stream flowing N. Going N., and ascending the valley of a tributary of the stream, it presently turns E., enters the valley of the Gök Su, and ascends it to **Katranjy Innler** 33 miles. This road crosses Route 10 K at **Kurd Tahajyr**.

ROUTE 10 K

TOSTHAIR—SIVRI HISSAR, 68 $\frac{1}{2}$ miles

This road has been traversed in a phaeton. No details are available except measured distances between the villages passed. General direction NW.

Starting from **Tosthair**, the road crosses the valley of the **Katryly Su**, and reaches **Sinjit Yaila** (9 miles). Still going NW.

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it reaches **Kurd Tahajyr** village ($21\frac{3}{4}$ miles), where it crosses Route 10J. It now goes down the valley of a tributary of the Sakaria, crosses the **Sakaria**, and reaches **Kabak** village ($30\frac{1}{4}$ miles). From **Kabak**, it goes round the N. side of **Boz Dag**h to **Koz Aghach** village ($46\frac{1}{2}$ miles), passing two unnamed villages on the way. Hence it goes NW. to **Hortu** village ($59\frac{1}{2}$ miles), and then follows Route 10 to **Sivri Hissar** ($68\frac{1}{2}$ miles). (See Route 10, ad fin. III.)

ROUTE 10 L

SAKUSHAGH—KATRANJY INNLER, 36 miles

This road was crossed by an English traveller on horseback.

From **Sakushagh** village the road goes NE. to **Yusuk Bashy** village (2 hrs. 5 min.), where it crosses Route 10I. Hence it goes N. along the usual Angora road to **Sinanly** village (1 hr. 20 min.) and **Toprak Bunar** village (10 min.) on the edge of a marshy valley running towards the Sakaria. Hence to **Turk Tahajyr** village, at the foot of the Sakaria canyon (fully 2 hrs.). Another 45 min. brings the traveller opposite **Kabak** (Route 10 K), where he leaves the road to Angora via **Ilja** and **Hammam** (Route 10 M) and turns E. up a dere for $\frac{1}{2}$ hr., and thence goes over undulating treeless plateau down to **Katranjy Innler**, $3\frac{1}{2}$ hrs. Total distance 10 hrs. 20 min., or about 36 miles.

ROUTE 10 M

FETHOGLU KÖPRÜ—YAPAN HAMMAM, 55 miles

This road goes down the valley of the Sakaria to **Kabak**, crosses the Sakaria below **Kabak**, and goes by **Ilja** to **Yapan Hammam**, coinciding with Route 8 from a point NE. of **Ilja**. The record is mainly that of an old traveller, who did the journey on horseback.

Leaving **Fethoglu Köprü**, the road goes eastwards to

Tatar Kõi village ($\frac{1}{2}$ hr.), and then crosses the Sakaria from r. to l. by a wooden bridge, and reaches **Deirmen** village (1 hr.). Hence down the valley of the Sakaria, which presently becomes narrower, keeping the river on the r., to **Elies Pasha Kõi** village (1 hr.) near which the stream from Gök Bunar (Route 10 J) enters the Sakaria, on its r. bank. Hence along the valley to **Külefe** village, close to the stream. Still along the valley of the stream (which occasionally loses itself in marshes, and occasionally flows with a swift current, describing wide curves : the valley is treeless, and is bounded by isolated groups of hills, which sometimes come close to the stream, sometimes stand at some distance)—to **Chakmak** village ($1\frac{1}{2}$ hrs.). Near Chakmak, the stream from Yusuk Bashy (Route 10 I) joins the Sakaria. Hence still along the left bank of the stream, to a point opposite Turk Tahajyr village (Route 10 L), where a road goes off r. and crosses the stream. Our road continues along the l. bank to **Kabak** village (3 hrs.) (see Route 10 K) and hence N. to a bridge (about 1 hr.) where the road crosses the Sakaria and goes on to **Ilija** village (about 3 hrs.). From Ilija, a road goes N. to **Sivri** (Route 10 N) (time 3 hrs.). Soon after Ilija, the road joins Route 8 and goes via **Eski Chalysh** to **Yapan Hammam**. Total distance, estimated from the map, about 55 miles.

ROUTE 10 N

SIVRI HISSAR—ANGORA, via KAVUNJY KÖPRÜ, 79 miles

A variety of roads go from **Sivri Hissar** due E. to the **Kavunjy** bridge over the Sakaria, passing through the prosperous villages on the well-watered NE. slopes of the Günüşü Dagħ. One of these roads leaves Route 10 at **Demirji Koi** (see Route 10, ad fin. IV) which is about 14 miles distant from Kavunjy bridge ; but other roads are reported to the S. of this one. They have not been explored.

From **Kavunjy** bridge, a road goes to **Polatly** station via Chanakjyk.

The road goes down the r. bank of the Sakaria and then strikes NE. to **Chanakjyk** village ($1\frac{1}{2}$ hrs.) and hence in the same direction over undulating country to **Polatly** station (3 hrs. from Chanakjyk). (Total distance, Sivri Hissar—Polatly, about 40 miles.)

The road from **Kavunjy** bridge to **Angora** goes E. to **Sivri** village (about 14 miles), passing several villages on the way. Hence it strikes NE. via **Baba Eyub** to **Balyk Koyunjy** village where it joins Route 9 to Angora. The times from Sivri to Angora are given as follows by an old traveller who traversed the route on horseback: Sivri to Baba Eyub, first over level plain and then over hilly ground, 4 hrs.; Baba Eyub to Balyk Koyunjy, 4 hrs.; Balyk Koyunjy to Angora, over undulating treeless plain, 6 hrs. Total distance, **Sivri Hissar to Angora**, 79 miles. Polatly station can also be reached from Sivri Hissar by Route 10 to Beylik Köprü (28 miles), and hence along the railway to Polatly station (40 miles).

ROUTE 11

CHAI—ESKI SHEHIR, *via* AZIZIE, 101 miles

From Chai to Azizie the road is a good chaussée, along which runs the telegraph. This section has been measured as far as Katshuby; its further course to Azizie is roughly indicated on the German maps, but no record of the itinerary is available. Water is plentiful along this road.

miles

- | | |
|----------------|---|
| 0 | Leaving Chai (Route 21, mile $142\frac{1}{4}$) the chaussée strikes N. over level plain, at |
| $2\frac{3}{4}$ | Passing E. of Chai station, and at |
| $5\frac{3}{4}$ | Crossing the Akkar Chai river by a wooden (?) bridge. The river is fordable just W. of the bridge, but the bottom is muddy. There is an old stone bridge about $2\frac{1}{2}$ miles E. of this point, which is in good preservation. A cart-road leaves the chaussée not far from Chai |

miles

- station, and goes over firm ground to this bridge, crosses it, and goes to Bolavadyn. At
- 8 The chaussée reaches **Bolavadyn**, a *kaimmakamlyk*, with a poor bazar, several mosques and khans (one good), and a branch of the Ottoman Bank. There is a telephone from the Konak to Chai station. The inhabitants are fanatical and unfriendly to Europeans. Roads go to Afium Kara Hissar (Route 16 A) and over Emir Dagħ via Karapunar (Route 11 c). Hence the road goes N. towards the foothills of Emir Dagħ. At
- 13½ A road goes off l. to a village, **Dishli**, 1 mile W. of the road. The houses are built of mud. There is a direct road from Dishli to Bolavadyn, W. of the chaussée. At
- 14½ A road goes off r. At
- 16¾ The road going N. from Dishli joins the chaussée l. and a road goes off r. at right angles to **Karaja Ören** village, 1 hr. to the E., on the hill-side. The road now rises. At
- 19¼ It passes a **Kahve** in a wooded pass, with a stream flowing down on the l. At
- 20¾ A road goes off r. to **Avdan Yaila**, ½ hr. to the E. At
- 21¼ A road goes off r. to **Choghu** or **Katshuby** village, lying close under high cliffs on the E., 1½ miles from the chaussée. From this point to Azizie there are no reliable details of the road, which is shown on the maps as going down the valley of the **Yedi Kapu** stream, passing near **Yedidere** and **Tezdere** villages, and presenting a mean downward gradient of about 1 in 80 to
- 36 **Azzie**, a large place with a big khan and a bazar, lying in the plain close to a hill called **Ada Chal**. It is a *kaimmakamlyk*. Roads go off to Piribeyli and the southern Haimane, to Angora, to Sivri Hissar, to Eski Shehir, and to Bayat (see Gazetteer). An open valley

miles

runs down from Azizie NE. to the Sakaria. It is bounded on the S. by Emir Dagħ and on the N. by rising ground of no great height, which divides it from the marshy plain of Alikel.

From Azizie, the direct road to Eski Shehir goes through

- 47 **Kyrk Punar** village, in the Alikel plain. An hour W. of this village, just where the mountains begin to rise, is Baghlyja village, south of a pass running up to Khosref Pasha Khan (Route 11 F). A road goes NE. to Alikel and Sivri Hissar, and a road goes N. to Chifteler.

From this point there is no record of the road, except that it passes through

- ca. 63 **Ikhsanie** village, 7 miles W. of Chifteler, on the road from Chifteler to Khosref Pasha Khan, and

- ca. 73½ **Chechengich** village (Circassian), 4½ miles E. of Seidi Ghazi, on the road from Seidi Ghazi to Chifteler. At

- ca. 79 It crosses the Seidi Chai near Uriam Baba Teke, below Seidi Ghazi, and just before

- ca. 91 **Devrent Kōi** joins Route 12, and so to

- ca. 101 **Eski Shehir**.

(An alternative branch of this road goes from **Ikhsanie** to **Uriam Baba Teke** via **Mejidie**, a village of refugees on the road between Chechengich and Chifteler.)

LATERAL COMMUNICATION BETWEEN ROUTE 10 AND ROUTE 11

ROUTE 11 A

KARABULUT—CHAI

A road is shown on the map going from **Karabulut** (Route 10) to **Chai**, going close along the southern shore of Ak Shehir lake. It crosses the railway 6 miles NW. of Ishakly station, and goes

to Chai between the railway and the chaussée. There are no details of this road, which must pass numerous farms, and is probably passable for carts in dry weather.

ROUTE 11 B

HAIRET KHAN—BOLAVADYN, 39 miles

A road, traversed partly on horseback and partly in a phaeton, leaves Route 10 at Hairet Khan, and goes along the northern shore of the Ak Shehir lake. At a point below **Üch Kuyu** (16 miles) it divides. One branch crosses the **Akar Chai** (23½ miles) by a bridge, and goes to **Ishakly** (29 miles). The other branch joins Route 11 c near **Orta Köi** village, 31 miles, and goes on to **Bolavadyn** (39 miles). It is thus described in the reverse direction by an English traveller : the road leaves Bolavadyn on the E., and keeps close under the Emir Dagħ on the N. side of the valley ; and skirting the marshes of the Eber Göl, crosses a low spur, and passes along the firm northern shore of the Ak Shehir Göl, beside a line of low cliffs. The plain between the Ak Shehir and Eber lakes is at all times very marshy, and to a great extent under water in winter. Water is very scarce along the N. side of the valley, and there are no trees.

ROUTE 11 C

YAVASHLY—BOLAVADYN, 51 miles

A road goes from **Yavashly** (Route 10, alternative branch) to **Bolavadyn**. It was traversed in a phaeton, and the following details noted :

miles

- | | |
|----|---|
| 0 | Leaving Yavashly village the road goes westwards, along the foot of Kurshunlu Dagħ on the r., and with the plain of Durgut on the l., and at |
| 3¼ | Passes Haji Mahmud Yaila . Still going W., the plain on the l. becoming narrower, at |

miles

- 8 $\frac{1}{4}$ It passes an old cemetery, called **Kyzyl Kuyu**, and at
- 8 $\frac{3}{4}$ The yaila of **Kyzyl Kuyu**. Between this yaila and Siram, at a point not determined, the direct road from Hairet Khan to Piribeyli (Route 10) is crossed. At
- 14 $\frac{1}{4}$ **Siram** village is reached; the backward reading is 90°. Siram lies on the eastern edge of a ridge running SE. and NW. Round a spur, about 3 miles distant and bearing about 150°, there is a village **Jebrail**. A valley runs up into the ridge close to Siram, bearing 220°. **Ashagha Aghyz Achyk** (Route 10) is visible about 6 $\frac{1}{2}$ miles distant, bearing 23°. The road now turns NW. along the foot of the ridge, and at
- 16 $\frac{1}{4}$ Passes **Karghaly** village $\frac{1}{2}$ mile to the l., and at
- 18 It passes **Burun Uju** village at the mouth of a valley running SW. into the hills. The road now turns more to the N., and at
- 20 $\frac{1}{2}$ Three yailas, **Ören Kõi**, **Duykeni**, and **Yüneke** are visible to the N. from 1 to 2 miles distant. Presently the road enters **Baghyrsak Dere** pass, and proceeds SW. At
- 21 $\frac{1}{2}$ It passes a **Yürük** yaila in the pass. Issuing from the pass, at
- 22 $\frac{1}{2}$ The road enters the SW. extremity of a plain extending NE. and SW., about 4 miles long and 2 $\frac{1}{2}$ miles broad. A chiftlik is visible on the NW. edge, bearing 320°. The road proceeds SW. through a low pass to
- 28 $\frac{1}{4}$ **Karapunar** village, in a valley, watered by fountains. The road now descends into the valley of Paroreios, turns W. along the edge of Emir Dagħ, and at
- 36 A road goes off r. to Chukurjak village, said to be 1 $\frac{1}{2}$ hrs. distant. At
- 36 $\frac{1}{2}$ The road passes **Yeni Kõi** village, $\frac{1}{2}$ mile on the r. Bolavadyn bears 285°, but the road in front winds to the N. of this line. At

miles

- 41 $\frac{1}{4}$ **Orta Köi** village is passed $\frac{1}{2}$ mile on the l. At
 45 $\frac{1}{4}$ A village is passed on the l. At
 51 **Bolavady**n is reached. The last 18 miles of the road
 lie on the N. side of the valley of Paroreios, which is
 described on p. 11 f.

ROUTE 11 D

PIRIBEYLI—AZIZIE, 28 miles

A good road, practicable for wheels. It goes over gently undulating country, with Emir Dagħ rising gently some distance on the l. and level plain on the r. Water is scarce from Piribeyli to Assar. Many cart roads cross this road, going from villages on the (unexplored) slopes of Emir Dagħ to Sivri Hissar.

miles

- 0 From **Piribeyli** the road bears 304° for about 10 miles. Passing through the green valley W. of Piribeyli, it presently enters rolling country, and at
 3 $\frac{3}{4}$ Crosses a road. Two villages are visible in the plain to the N., about 5 or 6 miles distant; **Yaryk Kaya**, bearing 352°, and **Tuluk**, bearing 18°. At
 7 $\frac{3}{4}$ A road crosses. At
 8 $\frac{3}{4}$ A road crosses, coming from a village **Avdan**, visible 1 mile to the l. At
 10 $\frac{1}{4}$ A road crosses, coming from **Bayemli** village, visible 3 miles to the l. At
 11 $\frac{1}{4}$ A road crosses, going to a yaila 1 mile on the r. At
 11 $\frac{1}{2}$ A road crosses, beside an old cemetery. At
 11 $\frac{3}{4}$ A road crosses, and a little farther on, a road goes off to the l. At
 12 The road crosses a dry river-bed (July). At
 12 $\frac{1}{4}$ }
 12 $\frac{1}{2}$ } Roads cross. At
 13 }

miles

14½

Davulga village is reached. The road now turns W. Just outside Davulga a road goes off on the r. **Pürnek** village, about 4 miles distant, bears 320°. At

15½

A road goes off r. to **Zot-Mohajir**, a refugee village 1 mile distant. At

16½

A small village, **Injik**, is visible, ¾ mile to the l. At

21½

Assar village is reached among the extensive ruins of the ancient Amorium. The ruins extend round a low hill, which is the culmination of a spur running N. from Emir Dagh. A stream flows N. to the W. of Assar. Leaving Assar the road goes W. through a fertile plain with many villages, and at

23¾

Reaches **Suvermez** village, and hence straight over level country to

28

Azizie.

ROUTE 11 E

AZIZIE—MAHLYJA, 25 miles

The road crosses the plain W. of Azizie, and then rises into the Phrygian mountains. It was traversed in a phaeton, and offers no difficulties.

miles

0

Leaving **Azizie** the road bears 263° over flat country. At

1¼

A road goes off l. Forward bearing 298°. At

1¾

A road goes off l. to **Günei Serai**. Forward bearing 310°. At

3

A road leaves on the r., and at

3½

A road crosses. Forward bearing 343°. At

4

A road goes off r. to a village **Tabaklar**, 1 mile distant. A little farther on the road divides, and the left branch goes to **Gümük**, which bears 337°. Three other villages are visible; **Syghyrajyk** bearing 332°, **Guyu Ev** bearing 355°, and **Ali Bey** bearing 15°. At

miles	
5½	The road crosses a large river-bed (dry in July), and at
6	Reaches Gümük village. The road leaves Gümük bearing 275°. At
7	Emir Kuyu village is visible, 1 mile to the l. The road goes along the river-bed for some distance, and then rises over the hills. At
14	The direction is westwards. Sülüklü village lies to the r. At
18¼	The road from Bayat joins on the l. At
20½	Yürtük Köi is passed, on the l. of the road. At
21½	Ancient ruins lie along the road. In this area several roads, used by wood-carters who work in the pine forests to r. and l., join the road. At
25	Mahlyja village is reached (see Route 12). (4½ miles SW. of Mahlyja, in an upland valley, lies Kilisçe Yaila , a Circassian village).

ROUTE 11 F

ESKI ALIKEL—KHOSREF PASHA KHAN, 25 miles

Traversed in a phaeton. Good road. Distances depend on native time-reckoning.

From **Eski Alikel**, the road goes SW. over rolling plain as far as **Baghlyja**. At 3½ miles it reaches **Aplak**, a new refugee village, goes hence to **Kyrk Punar** village (Route 11) (7 miles), and hence to **Baghlyja** (10½ miles), a big village on the slope of the mountains on the western edge of the plain. Spring water is plentiful. From **Eski Alikel** to **Baghlyja** there is a rise in elevation of about 770 ft., or a mean gradient of 1/72; but there is a sharp rise immediately before **Baghlyja** is reached. The road now turns NW. to **Asslanly** village (13 miles), passing **Koi** village on the hillside to the l. 1 mile before **Asslanly**. **Asslanly** lies under a large mound in the plain, from which there is a good view to the E. **Baghlyja**

bears 145° . W. of Asslanly is the entrance of an easy pass running up to Bashara. The road proceeds towards this pass, and at 14 miles **Kara Kaya** a small village lies in the plain $\frac{1}{2}$ mile N. of the road, and **Kady Yussuf** village about 2 miles farther N. **Sary Kavak** village lies $\frac{1}{2}$ mile to the S., on the hillside. The road trends from W. to SW., through a wooded valley, and at $18\frac{1}{4}$ miles a village **Göz Ören** is visible 2 miles N. of the road. The bearing from this point to **Bashara** (22 miles) is about 240° . From Bashara to **Khosref Pasha Khan** (25 miles) the road coincides with Route 12.

ROUTE 12

CHAI—ESKI SHEHIR, *via* BAYAT, $92\frac{1}{2}$ miles

This is the most direct road, but it crosses hilly country throughout its course. The old pilgrims route from Constantinople to Mecca passed this way, and is marked by the large ruined khans at Seidi Ghazi, Bardakjy, Khosref Pasha Khan, and Bayat. The road is nowhere difficult, water, grass, and firewood are plentiful everywhere, and there are good pine forests N. of Bayat.

miles

- | | |
|------------------|---|
| 0 | Leaving Chai town, the road coincides with Route 11 as far as |
| 22 | A point $3\frac{1}{2}$ miles due W. of Katshuby , where the road from Katshuby to Bayat crosses the chaussée. From this point to Bayat the general direction is NW. At |
| 23 $\frac{3}{4}$ | We see a Yürük village r., bearing 63° , $2\frac{1}{2}$ miles distant. At |
| 24 $\frac{1}{2}$ | We pass a Devrent, 5 min. l. Half a mile farther on the road turns due W., and at |
| 25 $\frac{1}{2}$ | We see a village, Yerikli , $1\frac{1}{4}$ mile on the r. We now turn N. along a river-bed for 2 miles, leave it, and at |
| 28 $\frac{3}{4}$ | A road joins on the l. The backward bearing is 140° , the forward bearing, towards Bayat, 320° . At |

miles

31½

We reach **Bayat**, a large village (*mudirlik*) with a kahve and the ruins of two large khans. The highest peaks of Emir Dagħ bear nearly SE. The village lies near the head of a broad valley which runs NE., watered by a stream which flows N. of Azizie, to join the Sakaria. (A road goes down this valley to Azizie, and an inferior cart-road goes SW. to Afium Kara Hissar.) The SW. extremity of the valley is dominated by a steep rocky hill, crowned with a ruined fort.

From Bayat to Khosref Pasha Khan there are two roads, said by the natives to take 4 and 5 hrs. respectively ;

(a) The shorter road goes by **Bashara** or **Sultanie**, a Circassian village 1 hr. from Khosref Pasha Khan. At Bashara, Bayat (not visible, and over a high ridge) is indicated as bearing 165° ; K. P. Khan, visible, bears 300° . The section Bashara–K. P. Khan has been crossed in a phaeton, but probably the section Bayat–Bashara is not passable for wheeled traffic. Length (as the crow flies), about 14 miles.

(b) The longer road (via **Mahlyja**) makes a détour to the W. It has been traversed in a phaeton.

From Bayat this road goes WNW. along the valley of the **Hissariyk Chai** for 3 miles. It then turns northwards out of the valley, and at $3\frac{1}{4}$ miles a road goes off to the r. At $5\frac{3}{4}$ miles we join the road from Azizie to Kümbet, and then go westwards along this road. At 8 miles we pass **Yürük Kõi** village on the l., and at $11\frac{1}{2}$ miles reach Mahlyja village. Soon after passing Mahlyja, we leave the Azizie–Kümbet road, and turn northwards through a valley, which is so narrow for a long distance that two wagons cannot pass each other, to Khosref Pasha Khan village ($18\frac{1}{2}$ miles).

45½

Khosref Pasha Khan is a decaying village called

miles

after its ruined khan. It lies in an upland plain among wooded hills. Roads go to **Sivri Hissar** via Bashara and Alikel and to **Kümbet** via Yazyly Kaya.

Leaving K. P. Khan, the road crosses two parallel ridges, running E. and W., and at

48 Descends into a plain, 3 miles broad, called **Kulaf Ova**. Near the farther edge of the plain, about

50½ It crosses a road from Kümbet to Chifteler. It then rises over a ridge, passing a village, **Karaghach**, descends into the valley of the Akar Su, crosses the stream, and at

54 Reaches **Bardakjy**, a village of 200 houses, with a ruined khan. The Akar Su valley is fairly fertile, and willows grow on the banks of the stream. A little below the village, on the right bank, there is a water-mill; opposite the mill, on the left bank, the road ascends through a ravine.

Between Bardakjy and Seidi Ghazi, the road crosses two broad limestone ridges, running NE. and SW., separated by a valley. Bardakjy lies about 80 ft. higher than Seidi Ghazi, the valley of the Seidi Su being considerably deeper than that of the Akar Su. The two ridges are sparsely covered with shrubs (juniper, &c.) and dwarf trees (pines and holm oaks), and the road often cuts its way into the bare rock.

60½ At the bottom of the valley separating the two ridges there is a good fountain, the water from which enters a small stream flowing NE. to join the Akar Su. From this point the road crosses the more northerly ridge, over a rocky undulating terrain, and descends through a gorge to

67½ **Seidi Ghazi**, a *mudirlik*, a decayed village of some 300 houses. It lies on the eastern slope of the valley of the Seidi Su, at an elevation of 3,264 ft. (the stream is 184 ft. lower, and the ancient acropolis, on the hill SE. of the village, 440 ft. higher). There is a poor

miles

bazar, a ruined khan, and a *türbe*, in charge of a college of Bektash Dervishes, containing the grave of Seidi el Battal, an Arab chief killed in battle at Afium Kara Hissar in A.D. 739. This place, the ancient Nacoleia, owed its importance in Roman times to the fact that it lay where the road Konia-Eski Shehir crossed the road Kutaya-Angora (Route 15, with 10 N).

Leaving Seidi Ghazi at the western end of the town, the road goes down hill to

68 $\frac{3}{4}$

Where it crosses the **Seidi Su** river by a poor wooden bridge, near a tumulus on the r. bank. The river is here about 20 yds. wide, and can be forded on either side of the bridge. The road continues across the valley, and climbs a flat ridge on the western side of the **Kyzyl Tepe**, a round pine-clad hill, which is visible for miles to the S. At

71 $\frac{3}{4}$

It descends 80 ft. into an upland valley, again rising 80 ft. on to a spur on which, at

74 $\frac{1}{4}$

There is a village, **Tashlyk**, $\frac{1}{2}$ mile l. of the road.

75

The road reaches its highest elevation (3,455 ft.), between Seidi Ghazi (3,264 ft.) and Eski Shehir (2,657 ft.). On this section there are two wells and a fountain close to the road. The view towards the **Türkmen Dag**h on the W. is mostly cut off by the **Üch Serai Tepe** and the high ridge of **Tashlyk**, but eastwards the view extends over the valleys of the **Seidi Su** and **Sary Su** rivers, with the bare jagged ridge of **Kyr Kyz Dag**h bounding the former valley on the E.

The road now descends into the fruitful, well-watered valley of **Alpanos** village, which is visible on the hill-side l. of the road. (From **Alpanos** a road, coming from **Kuyujak** village 1 hr. to the W., goes NE. via **Kyr Avdan** and **Kara Tokat** villages to **Sary Su Ojak** village, a *mudirlık*, and the head-quarters of the meershaum quarries on the **Ojak Dag**h, which is

miles

visible on the NE. horizon, with three well-marked peaks, which show up continuously from here to Eski Shehir. Distance **Kuyujak** to **Sary Su Ojak**, $17\frac{1}{2}$ miles.)

Crossing this valley the road rises over a steep, narrow ridge, immediately below which, at

76 $\frac{1}{2}$

Is a spring, **Koja Punar**, and then goes on to

78 $\frac{3}{4}$

A hill covered with ruins of ancient fortifications, called **Ak Viran**, commanding the plain to the E. This hill is the last spur of the range formed by the Tashlyk and Alpanos hills. The road now descends to

79 $\frac{1}{4}$

A fountain called **Seinap Kadyň Cheshme**. From this point the view of the W. is freer. At

80 $\frac{3}{4}$

The road passes a roadside inn, with a small village, **Devrent Kõi**. (From this point a road goes off W. to **Kara Bazar** village, $\frac{1}{2}$ hr. distant, whence roads go

(a) NW. via **Sürp Ören** and **Chalgan** villages to **Kara Shehir** village near the railway SW. of Eski Shehir.

(b) SW. up the Kara Bazar Dere via Avdan village to **Mussalar** village on the slopes of Türkmen Dagħ.

(c) SE. via **Kuyujak**, **Karanlyk Dere**, **Karajalyk**, and **Aivaly** villages to the valley of the Seidi Su and Seidi Ghazi.)

Close behind Devrent Kõi the road climbs on to a plateau about 300 ft. above the level of the plain, and goes for $2\frac{3}{4}$ miles parallel to the deeply cut dere of Kara Bazar (on the r. of the road) to

83 $\frac{1}{2}$

Ak Punar, a large and prosperous Circassian village. Here the stream turns N. and goes past **Mumluja** village and **Sultan Chiftlik** to the Porsuk Su. The road continues in the same NW. direction, with little variation in elevation, to

86

The ravine of Kyzyl Kaya, through which it descends into a basin, then crosses a ridge into another basin with a well r., and climbs past a quarry over the edge of the Eski Shehir valley, and so up a narrow ravine to

90 $\frac{1}{2}$

Eski Shehir.

ROUTE 13

CHAI—SIVRI HISSAR, *via* AZIZIE, 73 miles

The section Chai—Azizie is a chaussée. The section Azizie—Eski Alikel has been crossed in a phaeton, and the whole road is practicable for wheels. The distances from Azizie onwards depend on native time-reckoning.

miles

- | | |
|-----|--|
| 0 | Leaving Chai this route coincides with Route 11 as far as |
| 36 | Azzie . From Azizie to Alikel the general direction is slightly E. of N. The road goes over gently rising ground to |
| 41½ | Kuruja , a refugee village. Hence over prairie land, parched in summer, to |
| 47¾ | Batak , a recent refugee village. Sivri Hissar is visible, bearing 36½°. At |
| 51 | The road passes a recent village of refugees, Dilkissian . It now descends into the Alikel plain, and at |
| 52¾ | Reaches Eski Alikel , in a marshy plain, beside an affluent of the Sakaria. There is a khan, and fodder and cereals are abundant. Hence the road goes NE. along the edge of the plain, with low chalk hills on the r. to |
| 57 | Chandyr bridge over the Sakaria, an old stone bridge. The river flows with a considerable stream of perfectly clear water from WNW. to ESE. After crossing the bridge the road passes a chiftlik, and maintains a north-easterly direction as far as Sivri Hissar. It crosses the arid plain of the Sakaria, and climbs through a narrow valley on to a region of undulating limestone hills, reaching the top of the valley at |
| 60 | It then continues over limestone hills for 8 miles, and at |
| 68 | Enters a valley on the r. and ascends it. The valley, |

miles

called **Porsuk Dere**, is well cultivated, with hills rising gently on both sides, and it gradually becomes narrow as it approaches

73

Sivri Hissar.

(An alternative road is shown on the maps as going from **Azizie** to **Chandyr** bridge via **Bali Viran** village. It is probably shorter than the above route, but has not been explored. From **Chandyr** bridge to **Sivri Hissar** an alternative road goes via **Ajy Kõi** village, joining the above road in the **Porsuk Dere**.)

ROUTE 14

ESKI SHEHIR—SIVRI HISSAR, *via* ALPY KÖI, 60 miles

This road is practicable for wheels. It follows the valley of the **Porsuk Su**, keeping close to the railway, to **Uyuz Hammam**, then turns SE. over the hills to **Kaimaz**, and then ESE. to **Sivri Hissar**. The road passes near the railway stations of **Ak Punar** ($13\frac{1}{2}$ miles from **Eski Shehir** station) and **Alpy Kõi** ($24\frac{1}{2}$ miles). The railway from **Eski Shehir** station runs along the N. side of the river for $7\frac{1}{2}$ miles, then crosses to the south bank, recrossing to the north bank at mile $27\frac{1}{2}$.

The valley of the **Porsuk Su** slopes very gently downwards; the mean gradient from **Eski Shehir** to **Uyuz Hammam** is given as $1/2,000$.

Leaving **Eski Shehir**, the road keeps close to the r. bank of the **Porsuk Su** river for the first 5 miles. The river is here from 8 to 10 yds. wide, with a bed averaging several yds. in depth. It abounds in fish. The country is quite treeless. At mile 5, the road passes **Karaja Öyük** village r., and at mile $6\frac{1}{4}$ **Yazy Öyük** village, and from the point onwards it keeps close to the foot of the hills on the S. The valley, which widens immediately below **Eski Shehir** to a breadth of 6 miles, gradually grows narrower towards the E., and at

mile $10\frac{1}{2}$, where the road reaches **Cherkes Kõi**, a Circassian village, it is only about $1\frac{1}{4}$ mile broad. At mile $12\frac{1}{2}$, the road reaches a second Circassian village, **Ak Punar**, called after a fine spring near the road W. of the village. **Ak Punar** station is close by, on the N. **Ak Punar** village lies on a hill, and commands a good view of the villages in the valley and on the slopes of the hills to the N. East of this point, the mountains again recede both on the N. and on the S., and the plain widens to about 10 miles. After **Ak Punar**, the road crosses the railway, and keeping along its northern side, and crossing the river by a bridge reaches **Kara Öyük** village ($15\frac{1}{2}$ miles), which lies on an island formed by a branch of the river. East of this village, on the r. side of the river, there is a small hill, about 50 ft. high. At 22 miles the road again crosses to the l. bank of the river, and reaches **Alpy Kõi** village. The railway station is on the r. bank, half a mile distant. The surrounding ground is marshy. Water for drinking is got from the river. The road recrosses the river, and goes SE. along the foot of the hills on the r. bank to **Uyuz Hammam**, a Tatar village, with a lukewarm spring near it ($28\frac{1}{4}$ miles). On the opposite side of the river a long narrow spur runs down from the northern mountains, ending in black rocks near the river. E. of it, the valley is under view from **Uyuz Hammam** for a distance of 25 miles—a barren undulating plain about 10 miles wide. The villages of **Beylik Akhyr**, **Ak Köprü**, and **Doghrei** are visible, on the r. side of the valley. The hills S. of the **Porsuk** valley, which have been low up to this point, now begin to rise to a considerable height.

From **Uyuz Hammam** the road ascends, to turn SSE. out of the **Porsuk Su** valley. At $30\frac{1}{4}$ miles a **Kyzylbash** village, **Koshmet Kõi** lies on the l. There is no water along the road until **Baljik Hissar** village is reached ($36\frac{1}{2}$ miles), in a green valley, near the watershed. At $38\frac{1}{4}$ miles the road reaches the highest point, and **Kaimaz** is visible below. This point is 932 ft. above the level of the **Porsuk** valley, below **Uyuz Hammam**—mean gradient, about $1/68$. A wide view is

obtained over the upper Sakaria valley. The road now goes down hill to **Kaimaz** village (40 miles), 130 ft. lower. **Kaimaz** (200 houses) lies among trees and gardens, on the l. bank of a stream running down towards the Sakaria, and is on the direct road from **Eski Shehir** to **Sivri Hissar** (see below), with which our route coincides from this point.

From **Kaimaz** the road goes along the southern edge of the mountains which divide the Sakaria from the **Porsuk Su** valley. It first crosses some ridges, and at 44 miles goes through a pass between two masses of dark rock, from which springs rise. It then keeps along the foot of the mountain range over dry flat country to 56 miles, where it passes a valley watered by seven springs, and so to **Sivri Hissar** (60 miles).

(The bridges over the river in the **Porsuk Su** valley are of unusual construction. Square wooden erections resembling blockhouses are set in the river bed, and filled with large stones. Planks are then laid from blockhouse to blockhouse—the width of the pillars being equal to the width of the space between them. There are several such bridges over the stream.)

A more southerly route from **Eski Shehir** to **Sivri Hissar** takes the **Eski Shehir**—**Chifteler** chaussée as far as **Hamidie**, in the **Seidi Su** valley, and then goes eastward over easy country to **Kaimaz**, whence it coincides with above route.

ROUTE 15

KUTAHIA—**SIVRI HISSAR**, *via* **SEIDI GHAZI**, 86 miles

From **Kutahia** the road goes E. to **Alayund** station, and hence over the **Phrygian** mountains S. of the **Türkmen Dag**h to the valley of the **Seidi Su**, down the valley to **Seidi Ghazi**, and hence to **Chifteler** and **Sivri Hissar**. The distances in the mountainous region represent the traveller's estimate of air-line distances ; the actual road is longer.

miles

- 0 Leaving **Kutahia** the road goes E. over level plain along the branch line to
- 6 $\frac{1}{4}$ **Alayund** station, at km. 67, from Eski Shehir, and hence to
- 8 $\frac{1}{4}$ **Saka Kõi** village, near km. 71. The road goes along the N. side of the railway, strikes eastwards over gently undulating sterile country to
- 13 **Mohat Boghaz** village, at the foot of a high ridge stretching towards the N., whose flat slope runs down W. to the valley of Kutahia. It then ascends through the Mohat ravine, climbs over a narrow ridge, and at
- 14 Enters the upland valley of **Kainarja**, a ruined village, in which is a spring called **Aiji Oghlu Cheshme**. Hence the road goes up hill over a plateau overgrown with scrub, and furrowed by brooks which run SW. to the valley of the **Akche Mejid Su** to
- 18 $\frac{1}{2}$ **Av Oluk** village, in a fertile valley. The road now climbs to a col called **Ak Gedik** (20 $\frac{1}{2}$ miles), which marks the watershed between the Porsuk and Seidi Su valleys. The height above sea-level is 4,870 ft., 1,788 ft. above the plain of Kutahia and about the same height above the valley of Seidi Ghazi. The mean gradient from Alayund to this point is about $\frac{1}{42}$; the journey, on foot, from Saka Kõi took 6 hrs. The mountain-side is covered with pines. Kutahia is visible, bearing 291°. The road now descends, passing a spring on the eastern slope of the ridge, and about 2 miles farther on clears the wooded area, and enters an open plateau, falling away towards the N. At
- 23 $\frac{1}{2}$ A small village, **Damlar**, lies 500 yds. r. The road continues past an old cemetery, re-enters wooded country, and at
- 26 Reaches **Ekiz Oluk**, a big village in a fertile valley. Ekiz Oluk is 1 $\frac{3}{4}$ hours' walk from Ak Gedik col. Springs rise in the valley and flow northwards to the left branch of the Seidi Su.

miles

From Ekiz Oluk, roads go to (a) **Kümbet**, (b) **Kirka**, (c) **Seidi Ghazi**. The road to Seidi Ghazi has not been explored throughout. It was reported to go by **Ak Hissar** to **Ak In**, in the Seidi Su valley, and thence down the valley by Kessener to Seidi Ghazi. The approximate distances are Ak Hissar 32 miles, Ak In $36\frac{1}{2}$ miles, Kessener $41\frac{1}{2}$ miles, Seidi Ghazi $45\frac{1}{2}$ miles. The latter part of this section coincides with the road from Kümbet to Seidi Ghazi (Route 16).

45½ From **Seidi Ghazi** the road goes E. over rolling country to

49¾ **Chechengich** village (Route 11). Still going E. it enters the valley of the Akar Su, coming down from Bardakjy, crosses the river, and goes down the r. side of the valley to

54¾ **Mejidie Chiftlik**. Continuing down the r. bank to
59¼ It crosses the river by a bridge, and at

63¾ Reaches **Chifteler**, a large and rich village, and remount dépôt, with an imperial stud. It is the ancient Kaborkium, the head-quarters of a Byzantine army corps in the period of the Arab wars. An hour S. of Chifteler is the source of the Sakaria river, which is joined in the marshes E. of the village by the Seidi Su and the Akar Su. The road goes N., crosses the Seidi Su, and turns E. over an arid plain, passing fountains at mile $70\frac{3}{4}$ and $74\frac{3}{4}$, to

86 **Sivri Hissar**.

ROUTE 16

AFIUM KARA HISSAR—ESKI SHEHIR, *via* KÜMBET,
75 miles

This road is reported suitable for wheels, and is used by tourists going from Eski Shehir or from Kara Hissar to the Phrygian monuments at Ayas In, Yazyly Kaya, and Kümbet. Distances depend on time-reckoning.

Leaving **Afium Kara Hissar**, the road goes a little W. of N. up the valley of a tributary of the Akar Chai, keeping the stream on the r., and running close to the railway. About 1 mile W. of Afium Kara Hissar station, it crosses the **Akar Chai** by a stone bridge, and traverses a plain sloping gently upwards towards the N., marshy in the wet season. It crosses the railway twice before reaching **Gazly Göl Hammam** station, $10\frac{1}{4}$ miles from Afium Kara Hissar station. At this point the road leaves the level plain of the Akar Chai and ascends through a sterile valley, along the railway, to **Gazly Göl Hammam** village ($12\frac{3}{4}$ miles). Passing the village, the road crosses a small stream coming from the NW. by a bridge, beside which is a ford, and immediately afterwards crosses the railway, which now turns NW. up the valley of the stream. The road goes N. over bare downs to **Tekke Köi** ($15\frac{3}{4}$ miles), a mud village, 460 ft. above **Gazly Göl Hammam** station (mean gradient $1/60$), and hence in the same direction, without much change in elevation, to series of ancient rock-cuttings called **Tekke Kaya Viran** (19 miles).

The road now begins to rise, winding over subdued downs, and at 22 miles passes a poor spring, the water from which flows SE. At $23\frac{1}{2}$ miles it reaches the watershed between the Akar Chai and Seidi Su systems, a ragged ridge 620 ft. above Tekke Kaya Viran (mean gradient $1/35$). The view southwards from this ridge extends over a broad expanse of bare, arid hills, with folds running E. and W. to the plain of the Akar Chai and the mountains bounding it on the S. The road now descends, and at mile $24\frac{1}{2}$, on the r. in a ravine at right angles to the road, is a fine spring, the source of the Seidi Su. The road goes northwards down a narrow wooded ravine on the l. bank of the stream, which turns six mill-wheels on the r. bank between its source and **Bakshysh** village ($29\frac{3}{4}$ miles). The country here, in sharp contrast with the region S. of the watershed, is well watered, and covered with pines, holm-oaks, and shrubs.

From Bakshysh the road continues down the valley of the Seidi Su to **Kümbet** (33 miles).

An alternative road from **Afium Kara Hissar** to **Kümbet**, reported practicable for wheels, goes by **Ayas In**. It turns off r. from the railway before reaching Gazly Göl Hammam station, passes **Yarymja** village, 12 miles and **Dinar** village, 15½ miles and reaches **Ayas In** village, 18¼ miles. It joins Route 16 S. of the watershed (mile 23½).

From **Kümbet**, the road continues down the river valley, on the r. bank of the river, to mile 38, where tributaries enter the stream r. and l., and a road crosses at right angles, going from **Ekiz Oluk** and **Kirka** (Route 15) to the E. At mile 43 the river valley turns NE. At this point the elevation is 290 ft. lower than at **Kümbet**. The road crosses and recrosses the stream, and at 48 miles reaches **Kessener** village, on the l. bank. Hence it crosses the valley obliquely to **Seidi Ghazi** (52 miles). From **Seidi Ghazi** to **Eski Shehir** (75 miles), this route coincides with Route 12.

LATERAL COMMUNICATION BETWEEN ROUTE 12 AND ROUTE 16

Lateral communication is difficult in the mountain region. The following lateral roads are known :

ROUTE 16 A

BOLAVADYN—AFIUM KARA HISSAR, 33 miles

A good road, fit for wheels, goes from **Bolavadyň** to **Afium Kara Hissar** via **Sürmene**. It goes over level plain all the way, and is well supplied with wells and fountains.

Leaving **Bolavadyň** and going W., the road passes several wells and a good fountain before reaching **Hamidie** village (11 miles), at the foot of the hills on the r. [The name of this village was changed after the deposition of Abdul Hamid ; a visitor in 1912, speaking from memory, gives the new name as either **Mohammedie** or **Osmanie**.]

Passing S. of **Felleli** village (13½ miles), and passing some wells and at least one fountain, it reaches **Büyük Chobanlar**

(19½ miles), a large village in the plain, N. of the Akar Chai. A bridge is shown on the map, close to B. Chobanlar, connecting the village with the station of Büyük Chobanlar to the S. of the river; but in 1912 a phaeton going from the village to the station had to make a long detour to the W. to find a bridge. A stone bridge with several arches was crossed by a traveller in 1898 not far to the E. of Büyük Chobanlar. From Büyük Chobanlar the road goes to **Sürmene** (23 miles), a large village, and hence, crossing the Akar Chai, to **Afium Kara Hissar** (33 miles). There is no recent record of the section Sürmene—Afium Kara Hissar.

ROUTE 16 B

SÜRMENE—BAYAT, 28 miles

A road goes from **Sürmene**, 10 miles E. of Afium Kara Hissar, straight to **Bayat**. It was traversed in a phaeton in 1912, and was very rough going. It passes **Güntük** and **Ak Punar** villages, crosses the watershed, and goes down an easy valley for some miles before reaching **Bayat**. Total distance about 28 miles.

ROUTE 16 C

BAYAT—KÜMBET, 31 miles

A road goes from **Bayat** via Mahlyja and Kilisse Yaila to **Kümbet**. The section **Bayat—Mahlyja** (11½ miles) is described on Route 12. From Mahlyja to **Kilisse Yaila** (15¾ miles) the road goes SW. through pine woods. Kilisse Yaila lies in a narrow upland valley. From Kilisse Yaila, the road descends into the Kuru Boghaz and goes hence to Kümbet (31 miles) as in Route 20. A phaeton has gone from Bayat to Kilisse Yaila.

158 ROADS AND TRACKS—ROUTES 16 C, 16 D, 16 E, 16 F

COMMUNICATION BETWEEN ROUTE 16 AND THE ANATOLIAN RAILWAY FROM ESKI SHEHIR—AFIUM KARA HISSAR

Except in the region of the Türkmen Dagħ, which completely bars traffic, communication over hill-roads is open everywhere. The following roads are known :

ROUTE 16 D

SIPSIN—BAGHURDULU, 19 miles

A road is shown on a good German map going from **Sipsin** village, near the railway, $6\frac{1}{2}$ miles N. of Afium Kara Hissar, up a river valley to Baghurdulu. No details, length about 19 miles.

ROUTE 16 E

GAZLY GÖL HAMMAM—BAKSHYSH

In the triangle of hilly country between **Gazly Göl Hammam** station, **Düver** station, and **Bakshysh** village there is a network of roads, most of which pass through **Demirli** village, at the centre point of the triangle. Several of those roads are used by tourists visiting the Phrygian monuments, and are passable for phaetons, but details are lacking.

ROUTE 16 F

DÜVER—KÜMBET SU VALLEY, 20 miles

A road goes from **Düver** station over the hills to the **Chörek Dere**, and down the Dere to **Serje** village, **Kirka** village (see Route 19), and so to join Route 16 in the valley of the Kümbet Su, 5 miles N. of Kümbet. Only the northern portion has been explored. Total length about 20 miles.

ROUTE 16 G

MALATIA—KIRKA YAILA, 12 miles

A road goes from **Malatia** village, beside the railway 5 miles N. of Düver station, past **Geriz** village and **Erikli** village to **Kirka Yaila** (Route 19). No details. Total length about 12 miles.

ROUTE 16 H

KÖCHE KESIK—DEVRENT KÖI, 17 miles

N. of the Türkmen Dagh a road goes from **Köche Kesik** station past **Chalgan**, **Sürp Ören**, and **Kara Bazar** villages to **Devrent Köi** on Route 15. Total length about 17 miles.

ROUTE 17

KÜMBET—BARDAKJY, 13½ miles

The road leads from the valley of Kümbet uphill into the Doghany Dere, which lies about 660 ft. higher, and then over a rise into the valley of the Akar Su, which it descends to Bardakjy, about 100 ft. below Kümbet.

Leaving Kümbet village and going S. the road passes a large pond and the cemetery on the r., and here turns E. It crosses the dry bed of the torrent from Kuru Boghaz and crosses the valley to the foot of the hills bounding the valley of Kümbet on the E. (2 miles). It now rises, passes **Tongra Chiftlik**, and at 4½ miles reaches the highest point of the ridge, 660 ft. above Kümbet. It then descends into a depression sloping down to the S. and reaches **Tongra**, a Yürük village (5 miles). At 5½ miles the road enters pine-woods, which extend towards Seidi Ghazi. At 6½ miles a view is obtained through the Doghany Dere to Yazyly Kaya. Here the Doghany Dere opens out, and **Chukurja**, a Rumeliote refugee village, is visible ½ mile NW. At 7 miles **Chukurja** village is

reached, and the road now turns NE., crosses a plateau covered with oaks, and at $9\frac{1}{2}$ miles descends into a circular valley in which the Akar Su rises. The road follows the stream through a gorge, in which several bridges cross the sinuosities of the stream, and at $12\frac{1}{2}$ miles crosses it from r. to l. by a bridge, reaching **Bardakjy** at $13\frac{1}{2}$ miles.

N.B.—A longer but better road goes from Kümbet up the Kuru Boghaz Su to **Yapuldak** village, $3\frac{1}{4}$ miles, about 100 ft. higher, and hence over a pine clad ridge to **Yazyly Kaya**, a Circassian village (8 miles), and then NW. down the Doghanly Dere to **Chukurja**, $10\frac{1}{2}$ miles.

ROUTE 18

YAZYLY KAYA—SEIDI GHAZI, 20 miles

A road leads directly from Yazyly Kaya over the hills between Bardakjy and the Kümbet valley, to Seidi Ghazi. It is recorded by a traveller who crossed it on horseback.

The road goes NW. to Chukurja, and then N. throughout. Leaving **Yazyly Kaya**, it goes down the Doghanly Dere to **Chukurja** village ($2\frac{1}{2}$ miles), through pine woods. At mile 4 the road enters a clearing 1 mile broad and $\frac{1}{2}$ mile long, on the W. side of which is the ancient rock-fortress called Doghanly Kaya. Then follows $1\frac{1}{2}$ miles of woodland; the road is level, and rises gently to the large yaila of **Bel Ören**, in a plain of about 6 sq. miles (7 miles). Springs rise in this plain, and flow W. The road then descends through a wooded valley, passing a fountain. At mile $9\frac{1}{2}$ the valley turns E., and the road leaves it and climbs a steep ridge. The top of this ridge (10 miles) is the highest point on the road, being 400 ft. higher than the Doghanly Dere (mean gradient $1/80$) and 1,480 ft. higher than Seidi Ghazi (mean gradient $1/30$). Descending, the road crosses a second valley, running E. and W., and beyond the ridge on the other side reaches a large refugee village **Iki Kuyu** (13 miles). Here the pine forest

comes to an end, and the road goes on down a deep valley, under a steep ridge on the r., and reaches the valley of the Seidi Su close to **Örenjik** village, lying on the hills to the l. ($17\frac{1}{2}$ miles). It then goes down the r. side of the valley to **Seidi Ghazi** (20 miles).

ROUTE 19

KUTAHIA—KÜMBET, 41 miles

This route coincides with Route 15 as far as **Ekiz Oluk** (26 miles). Leaving Ekiz Oluk, it climbs over a low watershed near the village on the SE. and then turns southwards along the west side of a ravine with steep walls to **Kirka Yaila**, a settlement of refugees (29 miles). It then turns sharply E., descends steeply into the bottom of the ravine, and, emerging from the ravine, crosses a flat ridge and reaches the wide, bare plain of Kirka, which stretches NE. and SW., and is about 6 miles long and $2\frac{1}{2}$ miles broad. In the NE. corner of the plain lies the large village of Kirka, which is visible from the road for some distance. At mile 33 the road crosses the **Chörek Dere Su** and a mill-race by two bridges—this stream comes from Serje, a Circassian village in the hills to the SW. of the plain, and flows slowly to the NE., joining the Seidi Su at mile 38 on Route 16. A road runs along the stream from Serje to its junction with the Seidi Su. Passing **Jejer Chiftlik** close to the river (490 ft. lower than Ekiz Oluk) the road goes on to the eastern edge of the plain, rises over a ridge 130 ft. above the plain-level at mile $36\frac{1}{2}$, then enters the broad valley of the Kümbet Su, and descends the gentle slope running down to the river on the W. At the foot of the slope (mile 40) it passes **Kara Ören** village, and at mile $40\frac{1}{2}$ it crosses the **Kümbet Su** (here 20 yds. broad and 6 to 10 ft. deep) by a bridge called Seki Oghlu Köprü, and reaches **Kümbet** village (41 miles). The valley of Kümbet lies at about the same altitude as the plain of Kirka—3,700 ft. above sea-level.

ROUTE 20

AFIUM KARA HISSAR—KÜMBET, *via* **ISJE KARA HISSAR**, 41 miles

Leaving **Afium Kara Hissar**, the road goes ENE. over the plain, crosses the Akar Chai by a stone bridge, and enters a pass over the hills to the N. It passes between two lofty rocks about mile 7, goes for some distance through a narrow valley, passes over low hills bounding the plain of Isje Kara Hissar on the W., and reaches **Isje Kara Hissar** village (14 miles) at the northern extremity of a small plain, watered by a river flowing from the N. to join the Akar Chai. This is the ancient Docimium, famous for its marble quarries, which lie $2\frac{1}{2}$ miles to the SE., on the eastern side of the plain.

From Isje Kara Hissar to Kümbet the road ascends the river valley northwards, passing **Karaghach** village (16 miles), **Tokaz** village (20 miles), and reaching **Baghurdulu** village ($23\frac{1}{2}$ miles). Next it crosses the watershed dividing the Akar Chai and the Seidi Su systems, and about mile $26\frac{1}{2}$ enters the valley of Kuru Boghaz, which it descends to **Yapuldak** village (37 miles) and **Kümbet** (41 miles).

There are two other roads from Afium Kara Hissar to Isje Kara Hissar, one going by **Sürmene** and **Gebejiler**, the other by **Susuz**. A road is reported to go to **Baghurdulu** via **Ambanaz** and **Chükrik**, but it has not been explored.

ROUTE 21

KONIA—AFIUM KARA HISSAR, $172\frac{1}{2}$ miles.

miles

0

Konia. From the British Consulate (1908), the road passes through the suburban gardens, and crossing the railway, joins the chaussée to the N. $2\frac{3}{4}$ miles from the Consulate the forward bearing is $121\frac{1}{2}^{\circ}$.

miles

9½

Cross the **Malas Dere Su** channel (dry) by a stone bridge.

12

Cross the **Maramsha Dere Su** channel (dry) by a stone bridge.

14

Cross the **Devrent Köprü Su** channel (dry) by a stone bridge. (This bridge was found badly damaged on a later journey, 1912). On the N. side of the river channel to l. is an old khan (**Dokuz Devrent Khan**). To r. is a new village of immigrants.

14½

A road goes off to **Punar Bashy Station**. Route 7 b.

The road to Sisma goes off l.

The Sisma road climbs steadily and then descends into a valley. At mile 20 from Konia the road reaches the top of the ridge bounding the Sisma valley on the E. It descends into the valley, crosses the stream by a stone bridge at mile 20½, and enters **Sisma** village (20½ miles). The village is on an ancient site in a fertile and well-watered valley.

From the bridge a road mounts the hillside to the cinnabar mines (3½ miles), worked till after 1910 by an English firm in Constantinople. The mines bear 336° from Sisma. The settlement, now the property of the Turkish Government, contains some well-built houses, and has a good supply of spring water. The nearest railway station, by road, is **Punar Bashy** (17½ miles). **Serai Önü** is much nearer by air-line (about 7½ miles), but is cut off by a ridge impassable for wheeled traffic, and crossed only by a mule-track to **Ladik**.

An hour's climb up the mountain-side behind the mines brings one to a point which commands a wide view over the lower hills to the E., the railway, and the plains N. and E. From this point, the mining settlement bears 76° and Sisma village 144°. On the bearing 93° and about 4½ miles NE. of Sisma village there is a remarkable peak which deserves

miles

notice, because it is easily accessible from the chaussée, and dominates the roads and railway at the angle between Serai Önü and Konia. It is a circular hill crowned by a mass of dark-coloured rock, and forms as it were the north-eastern bastion of a ridge which runs out towards Nevine and then bends S., enclosing the Sisma valley like a rampart. The chaussée from Konia to Ladik bends sharply round close under it, and the villages of Baghregurt, Nevine, and Kurshunlu lie on its lower slopes. This peak is a landmark all over the plain to the N. It is called locally the Kara Dag, or **Nevine Dag**.

Immediately below the Nevine Dag, on the N. and E., there is a pass traversed by the chaussée from Konia to Ladik. Beyond this pass there is a ridge which begins S. of the railway E. of Serai Önü, runs S. about 6 miles, and then turns E. for 10 miles, where it joins the Boz Dag N. of Egribayat. The railway from Serai Önü station passes N. of the northern arm of this ridge, called the **Demir Tepe**, then bends S. and mounts the high ground in the angle as far as Meidan station. It then climbs laboriously over the eastern arm of the ridge, the **Kemrelik Dag**, and descends into the plain of Konia near Chandyr Yaila. On this ridge, which is the col connecting the two mountain systems to the E. and W. and the passes over it, see p. 49.

18½ A road goes off l., beside a fountain, to **Baghregurt Yaila**, 1 mile distant bearing 330°, on the hillside close under the Nevine Dag. Water from fountains. Forward bearing 360°.

19¼ The road to **Meidan** village and station (see Route 2) goes off r. bearing about 65°. Soon after, route crosses a stone bridge over a stream flowing l. to r.

20½ Pass a fountain. The road now begins to wind round to the W.

- miles
- 22 $\frac{3}{4}$ The road in front bears 331°. Serai Önü is now visible, on the same bearing.
- 23 $\frac{1}{2}$ The road to **Nevine** village (1 mile distant) goes off l. at right angles. Nevine is pleasantly situated in a little wooded glen, with good fountains, on the side of the Nevine Dagh. Another road goes off to Nevine $\frac{1}{2}$ mile farther on. (The direct road to Serai Önü goes off r. hereabouts.)
- 27 Cross a stone bridge over a stream. A khan to r. and a new Circassian village to l.
- 28 $\frac{1}{2}$ Pass **Devrent Khan**.
- 30 $\frac{1}{2}$ **Ladik**, the site of Laodiceia Combusta, a large village formerly famous for its rugs. It lies in a fertile, northward-facing valley, bounded E. and W. by outliers of the mountain mass to the S. There is a perennial river on the E. of the village, which covers a hillock, and is surrounded by gardens.
- A cart-road runs to **Kurshunlu**, formerly a yaila of Ladik, now a permanent village. It bears 128° from Ladik, and is 3 $\frac{3}{4}$ miles distant, on the hillside, just under the Nevine Dagh. From Kurshunlu to Serai Önü station a road goes E. of Ladik, distance 10 $\frac{1}{2}$ miles. The direct road from Ladik to Serai Önü station measures 5 $\frac{1}{2}$ miles, and bears 20°. The direct road from Serai Önü to **Konia** joins the chaussée near Nevine.
- Leaving Ladik, the road rounds a hill on the NW. of the village.
- 33 The road to Kunderaz (see Route 24) goes off l. The road proceeds over hilly country, rounding successive outliers of the Meilas Dagh on the l., and finally crosses a pass over a longer outlier.
- 40 $\frac{1}{2}$ It reaches **Kadyn Khan**, a large village with some shops, lying well up a slope which falls gradually down to the railway and Kadyn Khan station, about 6 miles NW. Roads go off to Kunderaz (Route 24) and to

miles

Kolu Kissa and Gozlu. Water from fountains. Road proceeds NW. over barren chalk downs.

46½ From an eminence Ilghin is visible, bearing WNW., about 12 miles distant. Road now descends into the plain which has lain on the r.

53½ Cross a stone bridge over a stream, the **Balasan Su**, flowing NE. to Atlandy, and, close beside it, the Anatolian Railway. Here the road from Atlandy (Route 10 c) joins on the r. Road continues along the N. side of the railway, with a steep ridge of limestone to the r.

55½ Pass a village on the r.

57½ Recross the railway.

59 Reach the khan of **Ilghin** town. The station is 1 mile NW. of the town.

In spite of its malarious climate, Ilghin is a prosperous and growing place. It contains two large khans, a fine mosque, and a small bazaar. The town is well supplied with fruit and cereals, and has many fountains of good water. It is a *kaimmakamlyk*. W. of the town are recently constructed barracks. Europeans should avoid it in summer, owing to the prevalence of malaria. (A bridle-path, Route 24, goes to Konia via Kunderaz.) Leaving Ilghin, road goes W.

61 Cross a stream, the **Ilghin Su**, by a stone bridge. This stream is fordable in summer.

61½ Pass a small bath-house, which covers a hot spring rising at the foot of the hill, and begin to mount the ridge bounding the plain of Ilghin on the W. From the top of the rise there is a view over the small lake filling the northern extremity of the plain, surrounded by steep rocky hills which rise almost immediately from the water's edge. The railway and a road pass along the western border of the lake. Chaushjy Kōi is visible over the lake. Road now

miles

crosses a treeless, barren succession of chalk downs and valleys.

74½

Arkut Khan, a village watered by a stream which flows from near Doghan Hissar (said to be 3 hrs. distant) to the lake NW. of Ilghin. The country now becomes more open, as far as mile 81.

81

Cross the Yusuf Yilan Chai, flowing from Doghan Hissar to the Ak Shehir Lake. From W. of Ilghin road has been crossing a low range of undulating hills which extends N. from the Sultan Dagh and separates the plain of Ak Shehir from that of Ilghin. On the N. it joins the chain of hills extending ESE. from Emir Dagh, which forms the northern boundary of the plain of Ak Shehir. Road now goes over level plain, crossing a few torrents dry in summer.

85½

Pass **Tepe Köi**, or **Kara Öyük** on the r. of the road. This is a large mud village on a remarkable insulated flat-topped hill. An old branch road runs past the other side of the village. Hence over fertile plain coming closer and closer to the Sultan Dagh.

91½

Ak Shehir.

From Ak Shehir to Ishakly (native reckoning 5 hrs.) the road goes NW. along the lower slope of the Sultan Dagh, which towers on the l. On the r. the slope merges in a low, marshy plain, beyond which, about 6 miles from the road, lies the lake of Ak Shehir. Much of the intervening plain is marsh-land, covered with reeds; some of it is cultivated, and there are a few villages. Beyond the lake of Ak Shehir, and the marshy area separating it from the Eber Göl on the NW., stands the Emir Dagh range. The valley between the two ranges forms a well-marked pass, but traffic is confined to the foothills on the N. and S., owing to the marshes which cover most of the plain

miles

The railway from Ak Shehir to Ishakly runs parallel to the road, some distance on the r. Water is abundant everywhere along this road; there are gardens, orchards, and fields of corn and poppy, and the tamarisk grows luxuriantly on the uncultivated spots.

93 $\frac{1}{4}$ Road passes through **Nedir** village.

94 $\frac{1}{4}$ The horse-path to Yalovach (Route 27) mounts a glen on the l. A stream flows down the glen and goes N. to Ak Shehir Lake.

99 $\frac{3}{4}$ The road passes between the foot of a steep and lofty cliff of limestone, an outlier of the Sultan Dagh, and the marshes on the r. A copious spring of cold water rises close to the road, under the rocks, and at once forms a considerable stream. This pass is called **Ulu Punar Devrent**, 'Pass of the Great Fountain'. **Yassian** station, on the railway, is 2 miles away, on the r. Hence the road goes NW., the Sultan Dagh now rising more abruptly out of the plain on the l.

104 $\frac{1}{4}$ **Derechin**, a large village with a khan. Road now turns more to the N.

109 $\frac{1}{4}$ Reach **Ishakly**, a large village in the plain, amid trees and gardens, with a fine ruined mosque. **Ishakly** station, on the railway, is 2 $\frac{1}{2}$ miles NE.

From Ishakly the road goes WNW., still keeping close under the Sultan Dagh.

113 Here a road goes off on the l. to **Yakasinek**, a big village about 1 mile off the road. Route is now approaching the NW. end of the great valley of **Phrygia Paroreios**, which it has traversed since leaving Ilghin. The valley lies between the Sultan Dagh on the SW. and the lower Emir Dagh on the NE.; these ranges now draw closer together and the road passes through the narrowest section of the valley, which terminates W. of Chai, where the Sultan Dagh makes a huge sweep to the SW. A small lake, the

miles

Eber Göl, lies amid marshes in the centre of the plain to the r., 3 miles distant.

The road now turns nearly due W.

139 $\frac{1}{4}$ Pass **Gedil** village on the l. (A road, practicable in summer, strikes off r. to Bolavadun—measured distance 10 $\frac{1}{4}$ miles. This road winds considerably, to avoid marshes.) Road still goes W.

142 $\frac{1}{4}$ Reach **Chai**, a small town with shops and a khan, pleasantly situated at the foot of Sultan Dagħ, at the mouth of a ravine watered by a stream, which flows over a wide talus to the Eber Göl. Here a chaussée strikes N., passing **Chai** station, 2 miles away, and going via Bolavadyn to Azizie (Route 11).

145 The Sultan Dagħ changes direction abruptly, and bends SW. Between its south-western extension and a range of low hills on the W. lies a valley called the **Karamyk Ova**. Route 31 strikes off l. along this valley, going ultimately to the valley of the Maeander and the Aegean Sea. This junction of the road from Konia which at Afium Kara Hissar throws off branches to Constantinople and to Smyrna and of the Maeander route is one of the most important strategical points in Asia Minor. The actual junction is near a farm on the l. of the road. The road continues W., crossing the mouth of the Karamyk Ova, and then turns NW. to skirt the low hills on the W.

148 $\frac{3}{4}$ It crosses a small stream coming down the Karamyk Ova, and winding N. through marshes to join the Akar Chai, which flows eastwards through the plain on the r. towards the Eber Göl. This plain, level and marshy, is a westward continuation of the valley of Paroreios, lying between the Emir Dagħ on the N., and the complex of hills SE. of Afium Kara Hissar. Pass several farms, and a bath-house.

159 $\frac{3}{4}$ Pass **Büyük Chobanlar** station, on the r. (The road joining the station to the village of **Büyük**

miles

	Chobanlar makes a <i>détour</i> to the W. to cross the Akar Chai by a stone bridge.)
162½	The road crosses the railway, and continues along the N. side of the railway to mile 167,
167	Road recrosses the railway.
172½	Reach Afium Kara Hissar .

ROUTE 22

KONIA—DINEIR, *via* KARAGHACH, 177¾ miles

This road, formerly of some importance, has fallen into disuse since the railway from Afium Kara Hissar to Konia was built. Traffic now goes by rail to Afium Kara Hissar and thence to Dineir via Sandykly. The following itinerary is that of a French traveller (1898) who seems to have followed the old araba road all the way. The journey (on horseback) lasted 61 hrs., which works out at rather less than 3 miles per hr. (The distances are slightly over-estimated; see note at end of route.) As far as Yonuzlar this route coincides in part with Route 34.

miles	Time in hours (inter-mediate)		
	h.	m.	
0	0	0	Leave Konia , Konak meidan.
	45		Enter the plain, cross the railway, and follow the <i>chaussée</i> to Bey Shehir, accompanied by the telegraph. The plain is cultivated and dotted with trees. Direction WNW.
	10		Some houses and two <i>türbes</i> .
5¼	50		Well and khan (Grutu Delik Khan). Now ascend gently through bare rocky hills by a good road. Horse-road frequently avoids bends of <i>chaussée</i> .

miles	Time in hours (inter- mediate)		
	h.	m.	
		25	Summit. Good view of Konia plain. Level road along flank of hills on r.
		25	To r. beyond ridge a pointed peak (Takaly Dagh ?).
	1	25	End of ascent ; last view of Konia plain. Road goes downhill westwards, accompanied by telegraph. Pass a fountain in a ravine, and wind through bare hillocks.
		45	Reach a small plain surrounded by bare hills.
14½		10	Altyn Tepe Devrent ; in front, to r. of road, Deirmen Kõi. Serai Kõi visible on mountain to r.
		8	A brook ; trees. Cultivation in the plain.
		2	Bridge over a second brook.
			Enter a defile between bare hills r. and l.
		50	A fountain on l. A little farther on a second fountain on r.
		35	Dry fountain r. Road stony but good.
	2	50	Small stream, Churuk Su .
		30	Pass a <i>medresse</i> .
29½		5	Kyzyl Ören village.
			Mill to r. on leaving. Direction NW. Through fields over rocks, and then enter a small cultivated plain with hills, wooded on r., bare on l. Small stream. Well.
		45	To r., on top of low hill, Kyzyl Ören Khan .
		5	To l., behind a line of hills on S., Aghyz village, a few of its houses visible. To r., farther on than Kyzyl Ören Khan, and lower in the plain, a long stone building, also called Kyzyl Ören Khan , with a well.

miles	Time in hours (inter- mediate)		
	h.	m.	
	30		Telegraph, coming from r., rejoins the road, which is good.
	10		Hills on either side draw closer. Below the road, a brook.
	10		Old Turkish cemetery r.
	5		Enter defile. To r. and l. dwarf pines on flanks of hills.
	20		A yaila to l.
	20		Enter a small, bare plain.
	20		To r., at some distance, among wooded hills, a rock with ancient ruins, called Assar Kalesi . Still follow chaussée with telegraph. Direction NW. Descend course of small stream.
	15		To l. a mountain with many small peaks ; to r. a small hill covered with scrub.
	40		Enter Baghyrsak Dere , a defile with stream ; many windings.
	15		The defile narrows.
	15		A mill to l. A few minutes farther a stone bridge. Cross the stream. Sandy road. Direction SW. To l. low hills.
	30		To r. a Roman milestone belonging to a Roman road from Yalovach to Konia, following same course as the present.
33 $\frac{3}{4}$	5		Yonuzlar village among trees. Direction W. through cultivated plain. Good road. Telegraph on l.
	25		Plain now bare. Cut across it by a path. On l. bare stony hills. Come on stream again, and cross it. On over the plain now cultivated again. Direction WSW. Trees to l. and later to r. beside a village, Chukur Agha . Leave

miles	Time in hours (inter- mediate)		
	h.	m.	
			the Bey Shehir chaussée and telegraph to l., and turn r. (westwards) over the plain. Come to stream again: it winds much; road touches it several times. Direction WNW.
	15		Pass a mill with two trees. A little farther on tobacco fields. To l. hill covered with pines, to r. bare hills. Good sandy road.
46 $\frac{3}{4}$	25		Yegiren village. Fountain. Direction NW. Rise in ground. Cross a plateau. Fair road, but stony. Pines and cypresses. Descent.
	50		Small plain running N. and S. On l. a dry stream and wooden bridge. Go W. a little, then incline to r towards a hill.
	10		Turn to r. by side track and presently descend to l. into plain again.
	35		Cross dry river-bed. Then go r. along araba road towards a well. Direction W. Succession of hills covered with scrub.
	40		Small elevated plain. Some cultivation.
	15		Well on l. Cross araba road. Then slight rise. All round, a series of undulations. Some cultivation. Stony hill, difficult ascent.
	40		Summit. Overlook plain of Selki Serai. To W. of plain see Kiüshe, Bal Khan, and another village. Descend. In the distance, to l., Bey Shehir Lake. To l. of Selki Serai, and farther off, Suhan Köi. Along araba road to
59	55		Selki Serai village. Trees beside the village. Direction NNW. Plain cultivated in places.

miles	Time in hours (inter- mediate)		
	h.	m.	
			To r. the cemetery. Then some trees. Araba road.
	25		Small dry brook. View of Bey Shehir Lake to l.
	10		To r., behind trees, Bal Khan , a large village in two parts below bare hills dominated by higher hills covered with pines. Follow a stream. Good road through cultivated plain. To l. a well.
	20		A well.
	5		To r., at foot of mountain, Burunsuz ; to l., in the distance, Kiüshe . Direction NW.
63½	25		Kudret Hammam , bath and hot spring, to l. Trees. Water from spring flows away to l.
	27		Turkish cemetery.
65	8		Görünmez village and well to l.
	5		A brook. Ruined bridge. Good road. Trees r. and l. Gentle rise. At the top, cross a road. Slight descent. Ground hard and firm.
	25		Well and small stream. Short gentle rise.
	10		Well to l. Araba road rising gently between two rows of hillocks. Direction NW. Another hill. Series of ups and downs. To l. see Kirili, among trees near the lake. Bend to r., and go through gardens and orchards.
	45		Cemeteries r. and then l.
	3		Well to r.
71¼	7		Chaush village. View of lake. Direction W. by araba road over cultivated plain. To l. cemetery.
	40		Good araba road on firm soil. Direction NW.

miles	Time in hours (inter- mediate)		
	h.	m.	
	5		Well. Trees in plain.
	15		R. and l., cemeteries ; l. trees ; spring and brook ; cemetery. Direction NW. Route through scrub. To r. hills covered with scrub.
	35		Brook, fountain. To l., on hill-side across plain, Kiri Kōi .
	15		Cross a slight undulation.
	10		To l., on another hill, a mill : followed by a long row of poplars, marking course of stream. Farther and higher, Felle village. Well. Trees on l.
	20		To l., two mills.
	5		To r. cemetery near a mill-run we are following. Pass source of mill-run. Cultivated plain. Easy road between hills r. and l., covered with scrub.
81½	55		Felle Devrent , police post. Small stream passing before devrent and forming a pool. Araba road, following course of brook. Direction NW. Scrub on hills r. and l.
	40		Cemetery l., across the brook.
	5		Plain widens.
	10		Dry bed of brook.
	7		Well. Enter plain of Karaghach. Cross some small brooks on a bad chaussée made of blocks of stone. To r. stony hill ; to l. cultivated plain.
	23		Bridge over small stream. To l. trees along stream ; to r. trees scattered over plain.
	10		The chaussée crosses three brooks.
87½	25		Karaghach , small town, <i>kaimmakamlyk</i> . Pass through town. (Hence a road goes to

miles	Time in hours (inter- mediate)		
	h.	m.	
94 $\frac{3}{4}$	15		join the Ak Shehir-Yalovach chaussée, Route 26, at Örkenez, 10 miles NW.) Khan in Karaghach. Direction NW. Good road over sandy soil. To l. well. Cultivated fields.
	40		Houses and trees in a hollow.
	5		Road forks. Incline to W. by araba road. Presently direction NW.
	5		Cross muddy brook. Bend l. towards Nodura across the plain. A second brook, and a well. Road ascends course of small stream of dirty water. Good araba road. Direction NW.
	1	25	Nodura village. Direction NNW. Road over plateau cultivated here and there.
	45		Road bends to WNW. Succession of small valleys, with some cultivation and trees.
	25		Descend between limestone hills. At the bottom a mill-run.
	20		Mill to l. among willows, called Alty Assar Deirmen . Follow course of small stream.
	10		Mill. Limestone hills r. and l. The mill-run continues along road, fringed with willows.
	10		Mill. Mill-run on both sides of valley. Natural stream in middle.
100 $\frac{3}{4}$	10		Cemetery on r. Valley widens and fills with trees.
	5		Alty Hissar , large village, among trees. Good water supply.
	15		Cemetery on l. Dry fountain. Good road. Direction NW.
	20		Begin to cross long narrow plain in NW. direction, along a small brook. Plain extends

miles	Time in hours (inter- mediate)		
	h.	m.	
			E. and W., with a brook flowing through it, fringed with willows.
	15		Cross the stream, which presently divides into two. Go along the smaller arm. Soon it turns l. to rejoin the main stream.
	15		Ascend hill on l.
	15		Summit. View over a series of undulations.
	10		A road goes off to r. passing a fountain. Small plain crossed by muddy brook. Another hill.
	20		Spring and tree. Up and down over barren hills.
	25		Well. Road crosses, going to Yalovach on r., visible from here.
	5		Cross small stream.
	10		Summit of the hill. At the foot Hüyükklü visible among trees, in a long plain extending from Yalovach down to the Egerdir Lake.
	10		Telegraph from Ak Shehir to Isparta. Araba road. Small stream. Cultivation.
109	5		Cross bridge over a stream, and enter Hüyükklü village. Hence a road goes to Yalovach, 5 miles to NE. (see Route 30).
	25		Direction NW. through large cultivated plain. Well beside tree.
	5		Road forks ; go to r.
	10		Road forks ; go to l.
	10		Well.
	5		Brook ; ruined stone bridge. Direction NNW. Road goes along brook. Cross another brook, and follow a third.
112 $\frac{3}{4}$	20		Cemetery in front of Kursara village. Brook in village.

miles	Time in Hours (inter- mediate)		
	h.	m.	
			Direction NNW. Up a small stream, fringed with willows. Soon after turn to r. and over fields. Small brooks. Araba road. Small plain between slight undulations.
	35		To l. walled enclosure and huts among willows. Road turns to l., and crosses a brook by stone bridge.
	25		Cemetery. A little farther on, small pool surrounded by willows.
	25 sqq.		Cultivated plain ; made road in places.
	50		Descend to a plain. Direction W. To r., on N. side of plain, a village on a hill.
	15		Spring beside road. A few minutes farther on, a fountain. Good road. Trees in places. On l., series of bare rocks.
	40		Trees on l. opposite a bridge (one arch) over a brook. Down the stream a little way. Direction SW., then W. To r. small hill, which road crosses.
	15		Cemetery to l. ; cultivated fields.
124	15		Gundanly village, 40–50 houses.
			Direction SW. Down to plain again. Some walled enclosures to l. Cultivated plain, a few trees. To r. bare hills ; to l. bare mountain.
	30		View of lake (Hoiran Göl) in front. To l., at foot of mountain, some houses.
	20		Plain widens. Ground stony. Presently road forks. (This is probably the road to Kashykara and Aresli: see Route 31, mile 21.) Go straight on towards lake.
130	1	15	Churlu Khan ; fountain. Direction WSW.
		25	To r., at foot of hills, Churlu village ; to l.,

miles	Time in hours (inter- mediate)		
	h.	m.	
			long extent of reeds. Cultivation. Fields stony.
	7		Road passes between a reed-bed and a cemetery, close to the lake. To r. trees.
	20		Road touches shore of lake.
	10		Hill on r. approaches close to lake.
	20		Same remark. Hills on r. covered with dwarf trees.
	30		Road passes through cemetery.
	45		Chiftlik. Cultivated fields, very stony.
	10		A road crosses. Well. Take road to r. Ascent.
138½	5		A road crosses, going to Genj Ali village, l., at NNW. corner of lake. Road has left lake and gone W. To l., ravine between two hills. Descend towards WNW.
	30		Cross dry brook. Over a hill by a track. To r., at some distance, Yürük huts. Cross several tracks connecting them with Genj Ali .
	25		View of lake, l.; marshes on its border at this point.
	30		Skirt NW. edge of lake; marshy ground. To l. a plain with a hill in the middle, and trees and vines near it.
	1	10	To r., on flank of two hills separated by a ravine, Dereli , large village. Road forks, one branch going r. to Dereli . Take road to l. and cross cultivated plain. Cross several roads; to l. in plain, long row of trees along a stream.
	25		Cemetery on both sides of road.
	20		Same remark. Well on r.
152	1	40	Senirgent , small town, with <i>mudir</i> . Pass

miles	Time in hours (inter- mediate)		
	h.	m.	
			below the town and then draw away from mountain side and bend to r. Direction W. To r., across plain, large village among trees at foot of mountains. To l., mountain chain, bare and steep. Road trends NW.
	1	30	Rejoin road which was left to incline towards Senirgent. Easy road along course of dry river-bed.
	5		Bridge over river.
	5		Well. In front the hills on r. and l. approach each other and eventually unite, the plain ending in a sort of semicircle, with a large wood in front.
	25		To l., Borlu village on flank of a hill, separating the front of two high mountains, which join behind the hill. Part of village on an isolated hill to l. Pass through the wood referred to above. Then an ascent.
159½	25		Uluborlu , small town, <i>Kaimmakamlyk</i> . [Here the traveller was told that the road he had taken was not the best. He should have kept to the road along the lake to the point where the mountains fall perpendicularly to it.] Direction W. First over sand, then stony ground, among trees. Scraps of a made road.
	25		Road, hitherto passing walled enclosures, enters open country near a sluggish stream. Poplars and willows.
	10		Mill.
	5		Overlook a ravine ; to r. bare hills, to l. mill-run going to mill.

miles	Time in hours (inter- mediate)		
	h.	m.	
	5		To r. bridge over dry river-bed in ravine. Cross the ravine. Direction W.
	20		Recross to r. bank of ravine, ascending the stream. Road easy. At this point it looks down on ravine. To r. and l. rocky hills with scrub.
	15		Ploughed fields l.; cemetery r.
161	5		Ilei village to l.
	15		Incline to r., towards NW. Araba road. Then go NNW. Small plain enclosed by bare hills.
	35		Ploughed fields. Well. Cemetery.
162½	15		Saitler Devrent, zaptieh post. Cemetery. Direction NW. towards a defile. Small grassy plain.
	10		Ascent, then descent towards plain. Direction SW. We have rounded the mountain on S. Farther on, cemetery beside road. To r. ploughed fields. Good road.
	35		Rocky hills covered with scrub, r. and l.
	15		Good araba road on slope of rocky hill. Direction WSW.
	10		Descent past ancient ruins. View over plain in front, with mountains beyond.
167½	35		Chapaly village at foot of hill, where plain (Dombai Ova) begins. Brook runs through village. Cultivated plain, trees here and there. To r. hill covered with scrub; to l., higher hill with line of vertical rocks on top. Then turn to r., following foot of hill. Good road through cultivated fields. To l., in plain, a marsh, towards which road goes. Direction NW., then N.

miles	Time in hours (inter- mediate)		
	h.	m.	
170 $\frac{1}{2}$	1	0	Road crosses some low rocks with a spring issuing below. Beside it among willows, Punar Bashy Kahve , and a cemetery. Stream forms a marsh, overgrown with rushes, and then crosses plain to disappear in a <i>diiden</i> . Cross plain by araba road.
	20		Road forks ; take l. branch, which is said to cut off $\frac{1}{2}$ hour's journey.
	5		To r. cultivated fields ; farther away, cemeteries ; in the distance, village at foot of bare grey hills. Cross plain westwards by good road. To S. a village at foot of hills, at point where the two lines of mountains, which enclose the plain E. and W. dip to a lower level.
172 $\frac{1}{2}$	15		To l. near the road, Gökcheli , small village ; to r., at some distance, among trees, a village. In front of Gökcheli , beside our road, and on either side of a road which cuts ours and goes to Gökcheli , a cemetery.
	5		To r., near foot of hills, Kara Kuyu , and, beyond it, two other villages, also at foot of hills on W. of Dombai Ova . On E. side of plain, in distance, two more villages. In all seven villages visible in plain from this point.
	10		A road from N. to S. cuts ours. Whole plain cultivated.
	5		Wooden bridge over dry river-bed. Well. Bit of made road. Cross, then go along a brook. Farther on another road crosses ours.
	10		End of plain, which we have crossed by passing between the road going to Gökcheli and the marsh.

miles	Time in hours (inter- mediate)		
	h.	m.	
			In front of mountain still to be crossed is a longish isolated hill, which road rounds by the S. This hill rises very abruptly from the plain. Then enter a small plain between the hill and the mountain. Cultivated fields.
	5		Foot of the mountain. Telegraph from NE. joins road, or rather our road joins a chaussee which the telegraph follows. (The Dineir-Afium Kara Hissar chaussee.)
175½	5		Summit. View of Dombai plain and of plain of Dineir, which lies much lower. Descent, accompanied by telegraph.
	5		Direction SW. Several short cuts leaving and rejoining chaussée. Bare mountains.
	5		Grotto, with spring which divides immediately, the branches reuniting farther down. Down the water, passing several mills.
	20		The two streams reunite.
177½	7		Reach khan at Dineir .

[From Yalovach to Dineir, the road has been measured by trocheameter. The following measurements may be compared with the time-reckonings given above :

	miles.
Yalovach—Churlu Khan . . .	21½
Churlu Khan—Genj Ali . . .	10
Genj Ali—Senirgent . . .	13
Senirgent—below Uluborlu . . .	6½
Below Uluborlu—Ruins . . .	11½
Ruins—Bunarbashy . . .	3¾
Bunarbashy—Dineir . . .	7½]

ROUTE 23

KONIA—AK SHEHIR, *via* DOGHAN HISSAR, 77½ miles

This road is certainly fit for wheels between Ak Shehir and Balky ; for the rest of its course it is said to be. It is the shortest road from Konia to Ak Shehir and was an important military route in Byzantine and Seljuk times. Water is plentiful, and a moderate amount of supplies can be got in the larger villages.

miles

- | | |
|----|---|
| 0 | Leave Konia station. Road goes NW. across the plain. |
| 3 | Reach foot of hills bordering Konia plain on W. Bare sandstone hills broken here and there by deep watercourses, dry in summer. Steep ascent in a <i>dere</i> . |
| 5 | Serai village, a small village at the foot of Takaly Dagħ. The district abounds in pyramids of sandstone, capped by harder stones. Road goes round the foot of Takaly Dagħ over a number of watercourses, some of them dry, and through a wide field of volcanic rock, passing several fountains. |
| 10 | Descend into Sürek Ovasy , a fertile valley watered by the Bashara Su , a perennial stream which runs to Konia S. of the road, and supplies the town with most of its water. |
| 11 | Kechimusla village (200 houses), lies in a side valley 1 mile to r. The walls of this valley are steep and 300 ft. high. A stream flows down it, passing through the village.
Road ascends valley of Bashara Su, here about 1,000 yards wide, partly cultivated, enclosed by treeless sandy hills rising to peaks 1,200 ft. above the valley. Many side valleys r. and l. |
| 18 | Kavak Khan , a Seljuk ruin. Here a stream enters the Bashara Su valley from the N., carrying more water than Bashara Su itself. Kavak Köi , 300 houses, |

miles

mudirlik, lies 1 mile up this stream. Cultivation and trees.

Road continues up Bashara Su valley.

- 21 A track goes off r., said to lead to Kadyr Khan in 5½ hours. Country on l. wooded.

- 24 **Elkesik Khan.**

The valley now narrows, cultivation ceases, and the road climbs between steep slopes, covered with willows and conifers.

- 28 Reach watershed at a pass called **Devrent Cham**. Several brooks coming from the hills unite below the pass to form Bashara Su. Good view over mountain country SE. and NW.

Steep descent among wooded mountains.

- 30 **Devrent** village, 400 houses, scattered about at the entrance to a valley, through which a track runs over Ala Dagh to Yonuzlar (4 hrs. distant).

Road crosses a succession of ridges, covered with thick oak scrub.

- 34 Descend into valley of **Kyzyl Chai**, which road follows as far as Balky. Cultivation of opium and grain. Pine woods on hill to r.

- 39 Cross a stone bridge over Kyzyl Chai, here a wide strong stream, and enter **Ashagha Chigil** village, 300 houses. Valley here is wide. Proceed along r. bank of stream.

- 40 Cross to l. bank by a bridge. The hills on r. are bare, those on l. well wooded.

- 41 Pass a mill.

- 42 River turns abruptly N. and enters the narrow **Balky Deresi**. The mountain walls rise steeply 600 ft. on either bank, covered with cedars. The journey through the *dere* lasts nearly 3 hours. The hills on either side gradually decrease in length, and the valley widens.

- 48½ **Balky** village, 100 houses, among trees at the exit

miles

of the *dere*. An araba road goes on down the stream to Ilghin, $3\frac{1}{2}$ hrs. distant.

Road now turns W. and crosses a series of low ridges, the outliers of Sultan Dagħ on SW., and a series of valleys with watercourses, some of them dry. In the valleys corn and poppies are cultivated. The ridges are bare, or covered with oak scrub.

52 **Urus Kōi**, 400 houses, to r.

53 From a ridge come in sight of a wide, well-cultivated plain. Cross several watercourses in the plain.

56 $\frac{1}{2}$ **Dogħan Hissar**, a small thickly populated town. Khan. A good stream runs through the town.

Hence by Route 10 a.

77 $\frac{3}{4}$ **Ak Shehir**.

ROUTE 24

ILGHIN—KONIA, *via* KUNDERAZ, 52 miles

This route was traversed on horseback in 1887 by an English traveller, who describes it as follows :

From **Ilghin**, a hill path to **Konia** diverges r. from the post-road, which goes via Ladik. We leave **Ilghin** (July 9), cross a semicircular plain SE., pass **Sardu Kōi**, a rich village ($1\frac{1}{4}$ hrs.), and strike into the hills (2 hrs.). An hour's climb brings us to an undulating plateau, bounded on the right by a high mountain chain, the eastward continuation of the Sultan Dagħ, and on the left declining gradually to the great plains which stretch away as far as the eye can see. Under the mountains on the r. we can see another path, coming from the direction of Ak Shehir, converging towards our own, but not joining it until it reaches Kunderaz. Two hours bring us to **Osmanjyk** village, and $1\frac{1}{2}$ hrs. farther E. we reach **Kunderaz**, the last village before the pass over the mountain chain to Konia. [Total time $6\frac{1}{2}$ hrs., or about 23 miles.]

From **Kunderaz** the path climbs the steep northern slope of the mountain through dense forest, crosses the watershed,

and descends in a southerly direction a gorge which gradually narrows until there is only room for the path and stream. About $1\frac{1}{2}$ hrs. from the head of the pass, the path turns sharply to the l. and, climbing the side of the gorge, continues for $2\frac{1}{2}$ hrs. more SE. over stony uplands, broken by deep watercourses, now dry (July). On the r. stretches a wild waste of mountains, and before the traveller rise several peaks which mark the edge of the plateau towards the great plains. Passing a well, the first water for many miles, the road now enters a gradually deepening gorge, and reaches in $\frac{3}{4}$ hour the large village of **Tat Kõi**. Hence to **Konia** by **Sille**, a large Greek village, 3 hrs., first crossing lower hills and finally traversing the plain. [Total time, **Kunderaz** to **Konia**, $8\frac{1}{2}$ hrs., or about 29 miles. Total distance, **Ilghin** to **Konia**, 52 miles.]

From **Kunderaz** a road (fit for wheels) goes to **Ladik** ($11\frac{1}{2}$ miles), passing **Kestel** village (2 miles), **Shahr Ören** village ($3\frac{3}{4}$ miles), and reaching the **Kadyn Khan-Ladik** chaussée (Route 21) (9 miles) and **Ladik** ($11\frac{1}{2}$ miles).

From **Kunderaz** a road (fit for wheels) goes to **Kadyn Khan** ($8\frac{1}{2}$ miles), passing **Hajilar** village (1 mile), **Duraghan** village ($3\frac{1}{2}$ miles).

ROUTE 25

BEY SHEHIR—DINEIR, 125 miles

Distances approximate

miles	
0	Leaving Bey Shehir , road passes through gardens and vineyards W. of town and along S. shore of lake.
1	Iskander , camping-ground. Two roads go from here to Üskeles , one along shore, one farther inland. Both are passable for wheels, but the shore road is bad in winter. Present route takes shore road.
4	Bademli village visible to S. at foot of hills. [This village and the next are transposed on Kiepert's map.]

miles

5½

Karadiken village, 100 houses, Turkish. Some cultivation. Road leaves the lake and crosses a spur. A road to Ibrade goes off to S.

8

Cross the stream from Üskeles by a bad wooden bridge. Stream 15 ft. wide, 1 ft. deep; floods in winter. Road follows stream to

11

Üskeles village, 300 stone houses with verandas. Well-cultivated plain. Road fit for wheels in summer.

15

Road crosses a stream flowing to lake.

Road winds westwards round rocky spur and enters a broad swampy valley.

17

Road to Ibrade, used by arabas, goes off S.

Cross the valley.

20

Kashakly village, 150 houses (Murangoly on Kiepert should be some miles farther S. and Ada Köi and Chetme, placed by him on the E. side of the valley should be on the W. side).

[From Kashakly to the plain of Hoiram there are two tracks. The longer goes between the mass of Anamas Dagħ and its eastern outliers. The shorter and more difficult (described here) crosses the outliers themselves, which fall steeply to the lake.]

24

Track goes NW. over undulating ground, covered with low brushwood to a point level with the northern extremity of the marshy valley, where the stream enters the lake. The heights bounding the valley on the E. push a wooded spur out into the lake, which is continued northwards by an island. The island is wooded, and consists of a ridge with two peaks.

Track ascends in a dry stony valley; very difficult going.

27

Reach an upland valley surrounded by well-wooded heights.

Road crosses a pass and goes through forest along western slope of mountain. Anamas Dagħ towers across a valley to W.

miles

- 33 Reach northern end of ridge, and overlook plain of Hoiram, which pushes out into lake in a marshy spit.
 Descend to plain by very rough and steep track.
- 36 **Kurjova** village. Cross plain in direction of hills to N.
- 38 **Bayamly** village at foot of northern hills.
 Track goes W. along valley near stream flowing to lake, and climbs steeply in zigzags through a forest of pine and cedar.
- 44 After an ascent of 3 hours. (from Bayamly) reach the watershed of the ridge joining Anamas Dag and Dipoiras Dag.
 Descend steeply into a narrow valley, belonging to the basin of the Eurymedon river.
- 47 **Yaka** village, in a fertile side-valley. 40 houses.
 Avshar village, 60 houses, in a wide valley watered by a tributary of the Eurymedon. Corn, maize, and walnut trees.
- 48½ Over a ridge to **Terziler** village.
 The track described, probably not the usual road, ascends to
- 50 **Sivri Kalesi**, ancient ruins, and then down the western slope to
- 51 **Kara Abeli Ova**, a wide and fertile plain. Then over wooded hills into a still wider valley, called **Yilan Ova**, with several villages. Near Bujak village, to N., a strong stream, **Zyndan Su**, comes down through a defile.
- 55 **Ymrahor** village, among fruit trees.
 Hence for 2 hours. through Yilan Ova, well watered by tributaries of Eurymedon.
- 60 **Yilanly** village, at western edge of plain. Cross by a low saddle the watershed between Egerdir lake and the Mediterranean. Road winds downwards through narrow valleys, covered with scrub.

miles

- 64 Pass **Kuchai** village to r.
- 65 Pass **Alköi** village to l.
- 66 **Punarbazar**, large village at entrance to a fertile plain extending S. from Egerdir Göl watered by Boghaz Su. Cultivated fields, vineyards, and orchards. Cross the plain north-westwards.
- 68 Bridge over **Boghaz Su**, here a wide stream, near the lake. Road turns N. and goes by a narrow path between the lake and steep hills to l.
- 71 **Egerdir** (see p. 269). The road, a well-kept chaussée, passes through the northern suburbs of Egerdir, past **Yazlar**, through rich vegetation. It then winds upwards in a saddle between the cedar-covered slopes of Jamili Dagħ in the S. and the gentler ridges near the lake.
- 74 Reach the summit of the pass, and descend into a wide plain separating lakes of Egerdir and Buldur, and broken only by a few inconsiderable heights. Soil is fertile and partly cultivated. Direction W.
- 81 **Findos**, scattered village.
- 85 Turn SW. **Güle Önü** village lies to N.
- 92 Reach **Isparta**, at the foot of a high mountain-wall, Ak Dagħ. **Isparta Chai** flows through town in a deep bed. (See p. 272.) Leaving Isparta, road goes NW. over a fertile plain.
- 96 Pass **Chümür** village. Continue over plain for more than $\frac{1}{2}$ hr., and climb to a pass (**Ardyshly Bel**) between Kayi Dagħ (S.) and Chümür Dagħ (N.).
- 99 Pass a devrent r. in the pass. Redescend into plain, and presently see Buldur Göl on l. Plain, broken by a few tiny hills, is partially cultivated. Villages appear in the distance on hills round plain. Direction NW.
- 105 Cross a wide river-bed (dry) going to Buldur Göl.
- 111½ Cross a second wide river-bed.

miles

113

Enter **Kechiborlu** village, 200 houses, to NW. of plain on slope of hills. The village is built round a hill. Hence the road goes round W. side of Samsun Dag, passing villages of **Aidoghmush** and **Dikiji** to

125

Dineir.

This route-description was written before the railway from Dineir to Egerdir was built. An alternative route from Kechiborlu to Dineir, following the railway and joining Route 22 at mile 170½ is shown on the maps.

ROUTE 26

AK SHEHIR—YALOVACH, 34 miles

Chaussée and araba road (trocheameter measurements).

miles

0

Ak Shehir station. Turn SE. beside the cemetery.

3

Pass **Permata** (Greek village) on r. Well-wooded country.

5

Engilli village at the opening of a valley running up into Sultan Dag. Road follows western side of valley. Steep ascent. Several springs and wooden bridges on stone bases.

16

Reach summit of front ridge.

20

Reach summit of main ridge c. 2,400 ft. above Ak Shehir. (One authority gives 2,240 ft., another 2,506 ft.). Steady descent to

25½

Örkenez village, at the foot of Sultan Dag. Here the chaussée ceases, and a bad cart-road begins, leading over a continuous succession of undulations and valleys as far as Yalovach.

27½

Kuyujak village.

29¾

Road passes midway between **Gemen** r. and **Alty Kapu** l.

34

Yalovach, straggling place consisting of 12 mahalles or quarters, some of them separate villages.

ROUTE 27

YALOVACH—AK SHEHIR

Horse track, 6 hours., about 21 miles.

Leaving Yalovach, the road passes N. of the hill on which the ruins of Antioch are situated, and enters the valley of the *Anthios* near **Hissar Ardy** village (2 miles). Thence the road goes up a narrow gorge, through which a good stream flows. In 43 min. (3 miles) from Hissar the gorge divides; the road follows neither arm, but ascends in abrupt zigzags the steep and rugged spur of the mountain which divides the two gorges. The road here is roughly engineered, and fairly good. At the summit of Sultan Dagh (about half way between Yalovach and Nedir) a zaptieh post is passed on the r. The road then descends a river valley to **Nedir** where it joins Route 21 and turns r. to Ak Shehir. .

ROUTE 28

DOGHAN HISSAR—KARAGHACH, 22½ miles

This route is fit only for pack transport. It crosses Sultan Dagh by a pass rising to a height of 1,600 ft. above Doghan Hissar and 1,380 ft. above Arek. Water is plentiful.

miles

- | | |
|---|---|
| 0 | Leaving Doghan Hissar , take the Ak Shehir road (Route 10a) as far as |
| 3 | Chetme village. Then turn SW. over a spur of Sultan Dagh. |
| 5 | Reach the valley of a stream, Teternik Deresi , coming from the mountain. Track crosses the stream, and ascends the W. side of the <i>dere</i> , very steeply, between precipitous slopes covered with cedars. |
| 9 | After an ascent of 2 hours, reach a valley, well watered by springs, and surrounded with mountains. Cross this valley from NE. to SW. |

miles

- 11 **Ketenlik Yaila**, Yürük tents. Track ascends to pass.
- 12 Summit (1,600 ft. above Doghan Hissar). View over country to S. as far as Anamas Dagh. Bey Shehir Lake not visible.
Descent of $1\frac{1}{2}$ hr., steep, in a narrow rocky valley, down which flows a small stream. Issue in a well-watered cultivated plain.
- 16 **Ashagha Dinek** village, in the plain. Yokary Dinek lies on the hillside to E., l. of the road.
- 18 **Arek** village (80 houses) scattered about among fields and gardens.
[There is no record of the direct road from Arek to Karaghach, but it must pass along the southern edge of the plain, near **Chalty**, **Bey Köi**, and **Aipler** villages.]
- 22½ **Karaghach**.

[Another traveller notes that the time taken from Doghan Hissar to Ashagha Dinek was 4 hrs. 18 min. He joined the road in the Teternik Deresi 36 mins. from Chetme. 'The road crosses a real pass; the ascent on the eastern side is gentle, but steady; the descent on the western side is sharper and more precipitous. The pass is low' (i.e. as compared with the passes over Sultan Dagh farther west).]

ROUTE 29

KARAGHACH—BEY SHEHIR, 38 miles

From Karaghach to Eflatun Punar, a spring with Hittite reliefs lying E. of the middle of Bey Shehir Lake, two routes are known. The first coincides with Route 22 as far as Selki Serai, and then goes due S. for 6 miles to Eflatun Punar. This road is the longer but it avoids the low-lying and fever-stricken region near the lake. The shorter road, that by

Kirili Kassaba (detailed below), saves 8 miles. Both roads cross the pass above Arek, at the SE. corner of the plain of Karaghach.

miles

- | | |
|-----|--|
| 0 | Leave Karaghach and go along S. side of plain, passing the villages of Aipler , Bei Kõi , and Chalty . Road climbs to a saddle in which is |
| 6 | Felle Devrent , Zaptieh post. Not far below the devrent pass a fine spring. |
| 10 | Felle village visible to r. in a well-watered valley between Kyzyl Dag and Monastir Dag, among vineyards and gardens. |
| 11 | Kiachdede village to r. lying at foot of Monastir Dag. |
| 11½ | Monastir village l. Here come in view of Bey Shehir lake. |
| | Cross several watercourses, some of them dry. |
| 15 | Kirili Kassaba , 100 mud huts. Khan. Gardens protected by earthen dams against floods in rainy season, when the stream S. of the town overflows its banks. Kirili Kassaba is the market town of the district; like all the villages on the edge of the lake it is malarious in summer and autumn. The villages on the higher ground to the NE. are free from malaria. |
| | Road passes through middle of Kirili Kassaba and goes SE. over a series of undulations running down from the mountains to the lake. |
| 18 | Chukurkend village, 30-40 houses. |
| 19 | Road to Selki Serai goes off to l. before entering Yenije village. |
| 23 | Munafer village, near swampy ground on the edge of the lake. |
| 26 | Efiatun Punar , a fine fountain, with a Hittite monument near the entrance to a valley up which goes a road to Selki Serai. |
| 32 | Pass Kyr Stephan village, to r., on the shore of the |

miles

lake opposite an island. Road draws nearer to lake.

38

Bey Shehir town, lying on both sides of the stream which forms the outlet of **Bey Shehir** lake. The part on the northern bank is called **Icherishehir**; the two parts are connected by a delapidated stone bridge of 7 arches. The river is strong and swift. **Bey Shehir** contains about 600 houses, with a large barracks at the S. end of the town.

ROUTE 30

EGERDIR—YALOVACH, 40 miles

This road is fit for wheels, but for about 12 miles N. of the **Boghaz Su** it would require much repair if subjected to heavy traffic.

From **Egerdir** the road coincides with Route 25 until after the **Boghaz Su** (mile 3) is crossed. It continues across the valley of the **Boghaz Su** for a couple of miles, and then turns N. between the eastern shore of the **Egerdir Göl** and the mountain. Hence for 12 miles the road is very difficult. It follows, in general, the coast of the lake, and crosses a succession of spurs of the mountain, which fall abruptly into the lake. Some years ago the road was repaired along this section, and abutments built, but there is no recent information regarding the state of the road. At mile 15 the road issues from the pass (called **Demir Kapu** or **Eyerim Bel**) beside a police post, and enters the valley of **Yalovach**. At mile 17½ a large **Seljuk Khan** is passed. **Gelendos** is reached at the 25th mile. Hence the road goes up the valley of the *Anthios* river, passing **Baghly** and **Hüyüklü**, to **Yalovach** (40 miles).

ROUTE 31

CHAI—DINEIR, 57 miles

This road passes along a series of barren plains between parallel mountain ranges. Formerly it formed part of one of the principal caravan roads over Asia Minor, and was surveyed as the route of the Ottoman Railway from Dineir to Konia. Since the railways from Smyrna to Afium Kara Hissar and Afium Kara Hissar to Konia were built, this road has fallen into disuse.

The distances from Chai to Tatarly are calculated from the horse-times of an English traveller at the rate of 3 miles an hour, and are probably underestimated. The distance from Akarym to Chai was measured by trocheameter as $11\frac{1}{2}$ miles, but this was probably by a slightly longer road.

miles

- | | |
|----------------|--|
| 0 | Chai. Two roads to Afium Kara Hissar separate at Chai, one to r. through the plain, the other—the post and telegraph road—goes l. along the edge of the hills. Present route follows the latter. Afium Kara Hissar is visible. |
| 1 | A chiftlik $\frac{1}{4}$ mile to r. |
| $2\frac{1}{2}$ | Cross a stream. Road to Afium Kara Hissar diverges to r. Present road turns up a hill. |
| $3\frac{1}{2}$ | Afium Kara Hissar bears $302\frac{1}{2}^\circ$, Chai about 78° , Bazar Aghach 248° . Road is now crossing the line of the hills bounding the plain on the S. It passes along the eastern side of a gap about 3 miles wide, between Sultan Dagh and the hills SE. of Afium Kara Hissar. In front the road goes along a long wide valley, gradually descending after Karaja Ören is passed. Kassaba Chai flows N. 3 miles to r. |
| $4\frac{1}{4}$ | Bazar Aghach, $\frac{1}{4}$ mile to r. |
| 5 | Small stream from Sultan Dagh crosses road l. to r. |
| $5\frac{1}{2}$ | Karaja Ören, in Karamyk Ova. |

miles

Hence a road goes to **Kassaba** by **Innli** and **Eseli**, passing through a *dere* visible about 4 miles to r.

7½ **Akarym**. Large village, good water. Road crosses level plain, slightly descending, bounded on S. by **Kara Kush Dag**, rising in cliffs from lowest edge of valley. Road gradually approaches **Bozan Dag**, a low group of hills S. of **Kassaba Chai**.

11½ Edge of **Bozan Dag**. Hence **Akarym** bears 47°, road in front 230°.

14 **Ulanık**, ¼ mile to r. ; on opposite side of plain, close under hills, **Armudly** and half a mile W. of it **Orta Köi**, both Circassian villages.

17½ Diverge to l. from road, which has been bending to l. for some distance.

18 **Geneli**, close under **Turrije Dag**, lying between roads going to **Dineir** and to **Kassaba**. **Kassaba** reported 15 miles distant, the road going by **Ijekli** (3 miles) and passing between **Kazyk Köi** (9 miles) and **Uzun Punar**.

Geneli lies beside a small lake, which rises ½ mile W. under **Turrije Dag** ; a marsh extends to a *düden* near **Karamyk**.

Route crosses the stream, and diverges to r. from the *araba* road, and ascends a pass under the S. side of **Turrije Dag**.

20½ Top of pass. **Geneli** bears 40°. Descend sharply over 200 ft.

20¾ **Haji Yakup Köi**, ¼ mile to r., on upper edge of **Oinan Ova**.

21 **Aresli** lies 1½ miles to l. on opposite side of plain.

From **Aresli** a road, passable with difficulty for wheels, goes up a gorge to the E. and proceeds via **Kashykara** to **Gundanly** (see Route 22, mile 124).

21¼ Route rejoins *araba* road (see mile 18), which goes along N. and higher side of **Oinan Ova**.

miles

- 23 The pass (mile 20½) bears 48°; the *araba* road pass bears 67°: forward bearing 250°.
- 26 **Karadilli**, village at foot of hills on l. A little before this, the Oinan Ova has narrowed, the hills on S. approaching closer to the road; the hills on N. then go off to r. and leave a pass over which goes the Karadilli-Uzun Punar-Kassaba road. Kassaba reported 5 hours distant.
- 26½ Mountains on S. break away sharp to l. and *araba* road diverges down under them to cross Kyz Kapan Dere, bearing 232°. Road behind bears 73°.
- 27½ Road is going along N. side of **Chamur Ova**, a plain of irregular shape, whose greatest length extends from the Kyz Kapan to the Uzun Punar pass, about SW. to NE. There is no elevation between this plain and Oinan Ova, and very little elevation in the direction of Uzun Punar. No stream in either plain. **Hassanly Dag** bounds plain on NW. and gradually closes in as road proceeds. Gradual ascent.
- 29 Entrance to **Giaur Gedik** pass. Road behind for 5 miles bears 79°; road in front 243°.
- 30 Top of pass, a sort of plateau. Bearing backward 47°, forward 233°.
- 30½ **Kumullu**, ¼ mile to r.
- 31 **Akchy**, 2 miles to l. at foot of Kuru Dag.
- 32 View across **Chul Ova** in front. Road at opposite end of plain bears 240°.
- 32½ **Ginik**, ½ mile to r. at corner of plain, bearing 345°. Tatarly bears 209°. Road has been coming along a wide pass with slight descent. Diverge to l. from road, and go under hills on l.
- 33½ **Tatarly**. Roads go off to Kusura (Route 32), Kassaba, and Uluborlu. The natives reckon Uluborlu to be 5 hours distant, Kassaba and Dineir, 8 hours. The road now passes over Chul Ova.
- 33¾ Cross a small stream (dry) from r. to l.

miles	
35	Okjylar to l., under hills.
37	Alparslan to l.
37½	Horu to l., Churuklu to r.
39½	Ergenli to l., under hills.
41½	Road passes through a <i>boghaz</i> , with low sides, which presently opens out into a long narrow plain called Güngörmez Ova .
44½	Lowest part of plain.
44¾	Edge of plain ; road ascends.
45½	Summit of col ; road descends.
46½	Foot of pass.
47½	Karabdin , a few houses. Road ascends.
47¾	Summit : steep descent begins, with easy slopes on both sides.
49	Akche Köi . Fountain.
49¾	A road crosses beside a cemetery. The road now lies through the Dombai Ova , a plain extending N. and S.
51¾	Yerik Ören .
53	Road crosses a small stream by a bridge.
54½	Join the road from Afium Kara Hissar to Dineir.
54¾	Summit of pass N. of Dineir.
57	Dineir .

ROUTE 32

TATARLY—KUSURA, 18½ miles

This road provides lateral communication between Route 31 and the Dineir-Afium Kara Hissar chaussée (see *Handbook of Asia Minor*, Vol. II, Route 174).

miles	
0	Tatarly (Route 31, mile 33½).
¾	Road crosses the <i>araba</i> road Chai-Dineir.
2	Cross dry river bed (r. to l.) leading to marsh between Kadylyar and Okjylar.

miles

- 2 $\frac{1}{2}$ **Nemrik Mezarlyk**, slightly elevated above level of plain.
- 5 $\frac{1}{2}$ **Haidarly**, at the mouth of a gap in the hills. Road goes up a stream, which drives mills.
- 6 Two streams meet; road takes valley of one on l.
- 7 Two streams meet; road goes by one on r., which lies low down on r. of road.
- 8 $\frac{1}{4}$ Road forks by two streams; *araba* road goes l. to Kumullu; present route, a horse-road, goes r.
- 8 $\frac{1}{2}$ Top of pass. Tatarly is visible, bearing 95°. Road descends by side of small stream.
- 9 $\frac{1}{4}$ **Kumullu** visible on l., bearing 220°. The *araba* road comes down about $\frac{1}{4}$ mile to l., and goes by Kumullu across a ridge to Bel Kavak. Dombai Ova visible, down the stream. Now turn up a tributary.
- 9 $\frac{3}{4}$ Cross tributary stream. Here track forks r. to Ballyk, l. to Kyzyl Ören. Follow the latter, cross stream, then cross a ridge.
- 11 $\frac{1}{2}$ Good view from a high point over the Dombai Ova. Road goes round a ridge, and comes in sight of Kyzyl Ören. A *dere* and watercourse begin here. Proceed towards Kyzyl Ören.
- 12 $\frac{3}{4}$ Road to Kyzyl Ören goes off to l., along edge of ridge. Present route goes r. down river bed.
- 13 Fountain.
- 13 $\frac{1}{2}$ Road turns r. away from river bed.
- 14 Join Bey Kõi-Sandykly road on top edge of ridge. Presently, beside a fountain, the road forks r. to Ballyk, l. to Sandykly.
- 14 $\frac{3}{4}$ **Ballyk**. Natives reckon time by direct road to Kumullu 1 hour, Haidarly 3 hours. Road descends a little stream to join a high road, which crosses a ridge and then a valley. Here ridges extend across the plain towards the W. Road goes towards the outer edge of the ridges.

miles	
16 $\frac{3}{4}$	On a ridge, the forward bearing is 20°, road behind, 212°.
17 $\frac{1}{2}$	Road forks: present route goes on towards Kusura.
17 $\frac{3}{4}$	Top of third ridge since mile 16 $\frac{3}{4}$. Kusura is due N., road behind 187°.
18 $\frac{1}{2}$	Kusura.

ROUTE 33

CHIFUT KASSABA—AFIUM KARA HISSAR, 16 $\frac{1}{4}$ miles

It is doubtful whether this road is fit for wheels throughout; probably it is. An alternative road, passable for wheels, of which no detailed description is available, goes by Effe Sultan over the Ak Chakar pass, and passes via Mikhail to join the present route at Salar. The gradients on this alternative road are easy; the route detailed below is probably more hilly.

miles	
0	Chifut Kassaba , a large village (<i>mudurlik</i>) well watered by fountains. Fair khan.
$\frac{1}{2}$	Cross stream coming from NW. Road ascends steadily.
3 $\frac{1}{2}$	Aghzykara . This village lies on the slope of the hills bounding the plain of Kassaba on the N. Kassaba bears 199°.
5 $\frac{1}{2}$	Road crosses dry river bed from high up on hills.
6 $\frac{1}{4}$	Road crosses dry river-bed.
6 $\frac{3}{4}$	Kassaba bears 205. The <i>araba</i> road from Kassaba to Afium Kara Hissar passes through a <i>dere</i> E. of Effe Sultan, which lies at the foot of the northern hills, bearing 116°.
7 $\frac{1}{2}$	Road joins a stream, and turns more to N.
8 $\frac{1}{4}$	The stream forks: road goes by right-hand fork.
8 $\frac{1}{2}$	Top of pass. Kara Hissar bears 347°. Road descends.

miles

10½

At foot of hills. Cross a *dere* going at 75° to **Mikhail**, which lies 1 mile distant.

12½

Salar, ½ mile to l.

13½

Sülün, ¼ mile to l.

14

Pass an ancient site, and presently cross a stream.

15

Deper. This village is divided by a rocky ridge which projects far out into the plain. The *araba* road goes round the ridge. Present route crosses the ridge by a road worn deep in the rock.

16¼

Afiun Kara Hissar.

Note.—The following details depend on native report :

The direct road from **Kassaba** to **Chai** goes by Halych (1 hour), Eseli (2 hours), and Innli (5 hours) down the Kassaba Chai. See Route 31, mile 5½.

The direct road from **Kassaba** to **Tatarly** (see Route 31, mile 33½) passes near Mahmud Ghazi, and goes by Alaka (3 hours). The total time taken was given as 6 hours.

ROUTE 34

KONIA—BEY SHEHIR, *via* KYZYL ÖREN, 68 miles

This route, which is part of the Konia-Adalia road described in Vol. III, part 3, p. 86 ff., follows the same general direction as Route 22 as far as Yonuzlar, but the exact correspondences and divergences cannot be determined. The road is probably a *chaussée* throughout (see Vol. III, part 3, *loc. cit.*). The distances depend on time-reckoning, and are probably over-estimated.

miles

0

Konia (alt. 3,341 ft.). Road crosses railway N. of Konia station. Direction W. over plain.

2

Khoja. Alternative *chaussée* from Meram and Konia comes in. Ascent begins; gradient and surface good; road 20 ft. wide.

miles

- 8 **Ak Yokush** (alt. 3,940 ft.), small khan for shelter only. Silles visible to N. A track branches S. to Meram. Bare easy hills; little cultivation. Descent begins.
- 16 **Alty Kapu.** Stone bridge (one arch) over Bashara Su, which flows to Konia. Stream 30 ft. wide, 1 or 2 ft. deep in summer; liable to flood in winter. Good water and camping-ground; approaches easy; some trees and gardens. Village $\frac{1}{2}$ mile up stream. Ascent begins.
- 24 Ruined khan on summit of long easy hill (alt. 4,700 ft.).
- 32 **Kyzyl Ören**, more than a mile S. of chaussée. 150 Turkish houses, under a flat-topped mountain with pines on lower slopes. Wheat and barley plentiful.
Road crosses a well-watered and fertile plain for 4 miles, passing a Seljuk Khan.
- 35½ Enter valley of **Chukura Su**, narrow in places, sides steep and rocky. Road 15 ft. wide. No villages.
- 47 Chaussée (24 ft. wide), passes N. side of valley. Present track leads through **Yonuzlar** village on S. side, 200 Turkish houses; trees and gardens (alt. 4,450 ft.); supplies fairly plentiful. Valley 1 mile wide, easy hills.
- 48 Road crosses low ridge to SW. (Kiepert's map wrong), crossing Chukura stream above **Chukura** village, and enters valley of Millijöy stream above Bayat.
- 51 **Bayat.** Small triangular plain. Millijöy visible at apex to SE. From Bayat a track leads S. over the hills to Durghan.
Ford **Chukura Su**. Hence a road (fit for wheels) goes to Ilghin (10 hours journey).
- 54 **Chandyr.** Here Millijöy stream enters Chukura Su, forming a river 20 to 30 ft. wide, fordable in places in

miles

summer, impassable in winter except at bridges.
Valley fertile ; low easy hills.

57 **Saryköi.** 200 houses. Stream now called **Sary Su.**

60 **Köch.** Chaussée crosses low spur to S., coming into valley lower down.

65 **Avshar.** Road crosses Sary Su from E. to W. by stone bridge of three arches and runs 1 mile through gardens and orchards. Then S. over wet plain past **Icherishehir**, a suburb of Bey Shehir, lying on a mound by the lake. Road crosses stone bridge about 40 yds. long.

68 **Bey Shehir** (alt. 3,741 ft.), unhealthy town on the horns of a bay of the Bey Shehir Lake.

ROUTE 35

KONIA—BEY SHEHIR, *via* FASSILER, 48 miles

This is a horse track, unfit for wheeled traffic.

miles

0 **Konia** (alt. 3,341 ft.). Road passes through **Meram**, the garden-suburb of Konia, and runs SW.

8 Road enters the hills (2 hours).

12 **Chayrbagh**, straggling village with numerous gardens (3 hours). Track now runs over bare hills.

22 **Bulumia** (alt. 4,500 ft.), well-built village with small *oda* near a stream. Small bazaar (5½ hours).

Track now ascends the stream, passing a fountain and mill. The valley soon narrows. On the cliff to l. are rock-cut tombs.

23½ A ruined Seljuk Khan is seen to r. (6½ hours).

27½ Road leaves the stream (8 hours) and crosses the ridge to l. (the watershed between Bey Shehir Göl and the valley of Khatyn Serai) and descends to r. of Inlije.

miles

- 31½ **Inlije**, large village with mosque $\frac{3}{4}$ mile to l. (9 hours). General direction WSW. Road difficult to find, winding over broken country.
- 39 **Fasiller**, rich village (12 hours). Remarkable Hittite monument 5 minutes to W., in a *dere*.
Road passes through village of **Chichekler** ($\frac{3}{4}$ hour from Fassiler), where there is a fountain and small *oda*.
- 48 **Bey Shehir** (15 hours).

ROUTE 36

KONIA—KARAVIRAN, *via* KHATYN SERAI, 51½ miles

This road has been traversed in a phaeton, but the going from Mai onwards is very rough. Water is plentiful everywhere, and supplies for a small party can be got in the villages. Trocheameter measurements.

miles

- 0 **Konia**. Crossing the railway, and skirting the suburb of Meram, the road crosses the level plain, direction a little W. of S., and approaches Abbas Dagh.
- 12 **Pambukjy Khan**, at the foot of a pass over Abbas Dagh (Chalam Bel). The road over the pass is easy. Half way down the southern slope there is a fountain. Cross a valley from N. to S.
- 22½ **Khatyn Serai**, lying S. of a stream, which the road crosses by a stone bridge. The village, which is large, lies on a spur between this stream and one of its tributaries. A road runs SE. to Kavak, down the valley of the stream, 8 to 10 miles distant. (See Route 37, mile 29.)
The country SW. of Khatyn Serai is an elevated plateau, broken by a number of deep glens of varying width. Down each of these glens, a stream flows E. to join the stream flowing to Chumra. The land in

miles

the valley bottoms is fertile, while the surface of the elevated plateau is covered with scrub.

35 **Mai**, in a fertile valley. The road goes SW.

An alternative track, passing W. of the *araba* road leads from Khatyn Serai to Mai via **Chomaklar**, **Sadyklar**, **Tekke**, and **Chukur Chimen**, all lying in deep valleys. The time taken by a mounted traveller was 4 hours 40 minutes—about 14 miles.

38 $\frac{1}{4}$ The road (very rough) reaches the summit of a pass over the range separating the stream which issues at Chumra from the Charshembe Su, 500 ft. above Mai. A small lake in the hills above Mai is visible from here. Road descends.

40 $\frac{3}{4}$ A ruined Khan, with a cistern. No water. Hence by a rough cart-road which winds considerably.

51 $\frac{1}{2}$ **Karaviran**. Yokary, Orta, and Ashagha Karaviran lie in the fertile plain beside the Soghla Göl. Orta Karaviran, nearest the lake, is the largest of the three villages, being a small town with several mosques and inhabited by rich men living in well-built houses.

From the ruined Khan (mile 40 $\frac{3}{4}$) a road goes S. through a deep glen, affording a good road-bed all the way, to Balyklavu (8 $\frac{1}{4}$ miles). (See Route 39, mile 62.)

An alternative track from Mai to Karaviran has been traversed on horseback (6 hours, or 18 miles). It ascends a rough gorge to **Namusa**, a *yaila* of Orta Karaviran, and then descends steadily to **Ak Kilisse** on a rolling plateau E. of Soghla Göl, and then to Karaviran.

Travellers from Konia to Karaviran sometimes go by Route 34 to Bey Shehir, and then by Route 39.

ROUTE 37

KONIA—SARY OGHLAN, *via* KAVAK, 59 miles

This road, after leaving the Konia plain, goes over rolling or hilly ground. The distances as far as Dinorna and from Appa Serai to Jijek were measured by trocheameter. Elsewhere they depend on dead reckoning. The route is probably fit for wheels all the way.

miles

- | | |
|-----|---|
| 0 | Konia , beside the <i>Konak</i> . Road leads S. |
| 4 | Road crosses the Baghdad Railway midway between the 5th and 6th kilometre from Konia Station. |
| 8½ | Alak Ova Khan , a roadside shelter. |
| 14¾ | Boyalu , in the plain near Abbas Dagh. |
| 19½ | Kaya Hüyük , at the foot of Abbas Dagh. |
| 21¾ | Summit of ridge separating Konia plain from valley in which lie Kavak and Khatyn Serai. Konia bears 350°. The ridge is 565 ft. higher than Kavak. The Konia plain lies somewhat lower than Kavak. Road descends into the valley. |
| 29 | Kavak , on the stream flowing from Khatyn Serai. A large prosperous village. A road goes to Khatyn Serai (Route 36, mile 22½). Hence the road goes S. |
| 32¾ | Dinorna Ören , an ancient site, uninhabited. N. and S. of the ruins streams flow from W. to E.
From Dinorna, a cart-road goes to Mai (Route 36, mile 35), passing Üch Kilisse (5 miles) and reaching Mai (10¼ miles). |
| 34¼ | Road passes a cistern. The country is undulating. |
| 37 | A cistern. Road turns more to W. |
| 40 | A cistern. |
| 42½ | Cross a stream flowing SE. to join Charshembe Su. Road bends sharply to r. to cross a ridge, and descend into valley of Charshembe Su. |
| 45½ | Appa Serai , lying in a bend of the river. Road rises over hilly ground. |

miles	
48½	Alysa.
50½	Lamdar.
53¼	Jijek , on a stream flowing past Dorla (6½ miles distant) to the Konia plain. The road now crosses the watershed between the inland drainage area of the central plateau, and the Mediterranean.
ca. 59	Sary Oghlan (see <i>Handbook of Asia Minor</i> , Vol. III, part 3, p. 123).

ROUTE 38

KONIA—DORLA, 43 miles

This road is fit for wheels, and has been measured by trocheameter.

miles	
0	Konia , beside the <i>Konak</i> .
6½	Kara Arslan Khan.
12¾	Kashyn Khan , near the railway station of the same name.
16½	Charyklar.
24½	Chumra. The station of Chumra is 6½ miles to E. There is a newer village, also called Chumra, beside the station.
28¼	Ali Bey Hüyük , a large village beside a prominent mound in the plain.
36½	Road crosses the Charshembe Su at Baljyk Hissar by a good stone bridge. The village is Rumeliote.
38	Alkaran.
43	Dorla. Dorla lies at the bottom of a valley facing N. to the Konia plain, watered by a stream.

ROUTE 39

BEY SHEHIR—CHUMRA STATION, 116 miles

In default of a detailed description it will be useful to collect such information as is available regarding the chaussée from Bey Shehir to the Baghdad Railway at Chumra station. Following the irrigation canal, a road has been constructed all the way from Bey Shehir to the distribution centres in the plain S. of Konia, and it is possible to drive along the whole length of the canal.

The road runs from **Bey Shehir** along the valley of the **Bey Shehir Chai** to km. 64 on the canalized river, where the canal takes off which carries the water of the river round the N. and E. side of the **Soghla Göl**. The road passes **Karaviran**, a prosperous village, consisting exclusively of large houses, at the NE. corner of the lake, and then goes southward to **Serai**, where the canal joins the canal through the Charshembe gorge. The stretch of canal between the Bey Shehir Chai and Serai measures 32 km. ; the distance along the road from Beyshehir to Serai is about 58 miles.

From Serai, a cart road goes to **Siristat**, 18 miles distant (see *Handbook of Asia Minor*, vol. III, part 3, p. 98).

The road now turns E. and at mile 62 reaches the entrance to the **Charshembe Gorge**, beside **Balyklavu**, on the slope to the l.

The road through the gorge is 24 miles long. At mile $72\frac{1}{2}$ the Siristat river enters the gorge on the r. At mile $80\frac{1}{2}$ a (dry) torrent bed enters on the r. Two hundred yards below the end of the gorge (mile 86) a wooden bridge crosses the river to the r. of the road. **Appa Serai** (or **Seraiyk**) is reached at mile $90\frac{3}{4}$. Hence the road goes along the course of the Charshembe Su by **Simi** (102 miles), **Baljik Hissar** (with good stone bridge over the river) ($113\frac{3}{4}$ miles), to **Chumra Station** (116 miles).

From **Baljik Hissar** a road goes E. to the Baghdad Railway at **Aryk Ören Station**. Between **Ali Bey Chiftlik** ($5\frac{1}{2}$ miles)

and **Deli Osman Chiftlik** ($5\frac{3}{4}$ miles) it crosses the Konia-Karaman road (Route 44, mile 36). Thence it goes to **Kuzuzyk**, a Yürük village ($9\frac{1}{2}$ miles), **Küçük Ören** ($10\frac{1}{2}$ miles), **Jamili** ($13\frac{1}{2}$ miles), **Aryk Ören** village ($17\frac{1}{2}$ miles), **Aryk Ören Station** ($18\frac{1}{2}$ miles). This road is level, and passable for wheels throughout.

Along the course of the service road from Bey Shehir to Chumra, existing bridges were repaired by the Irrigation Company, and new bridges with iron girders on masonry abutments and piers erected where the new canals crossed existing roads. On the Konia plain, roads have been constructed along the banks of the main and secondary distribution canals, and the more important ones, when stone was available, provided with a metalled surface.

ROUTE 40

SIRISTAT—MANDASSUN STATION, $50\frac{3}{4}$ miles

This road is fit for wheels, and the distances have been measured by trocheameter. The route runs along the watershed between the Charshembe Su and Gök Su, and then drops into the Konia plain.

miles

0 **Siristat** (see Gazetteer). The road runs over undulating country, towards the E.

$4\frac{1}{4}$ **Ulu Punar**, at the foot of Assar Dagħ. This mountain commands a wide view of the country on all sides. On its summit is the site of *Isaura Palaea*, and near the site is a fine spring.

9 **Aidin Kyshla**.

The road winds over a rolling plateau, and then goes straight in the direction of Haji Baba Dagħ before turning off r. to Sary Oghlan.

$20\frac{1}{2}$ **Sary Oghlan**. SE. of the village, nearly 2 miles distant, rise two fine springs which flow towards the

miles

- Gök Su. The road goes NE. over undulating country, covered with scrub.
- 33 $\frac{3}{4}$ **Almasun**, on the S. side of a valley facing eastwards. On the N. side of the valley, about 2 miles distant, is a village Karasenir. The road now goes due E. over the level plain.
- 36 $\frac{3}{4}$ **Güdelisin**, a few houses on an ancient mound, the site of *Derbe*.
- 38 $\frac{3}{4}$ Ancient ruins, called **Karakilisse**.
- 40 $\frac{1}{4}$ **Kyzyl Kuyu**. Near this village the present route crosses the Konia Karaman road (Route 44), but the exact point is not recorded.
- 44 $\frac{3}{4}$ **İleteri**.
- 47 $\frac{1}{4}$ Road crosses the road from Aryk Ören station to Kassaba.
- 50 $\frac{3}{4}$ **Syghyrjy**, near **Mandasun Station**.

ROUTE 41

KONIA—YALY BAYAT, 38 $\frac{3}{4}$ miles

This road coincides with Route 45 to Sakyatan Khan, at some point beyond which it strikes l. from the road to Ismil, and makes for a pass over Boz Dagħ lying nearly due E. of Takaly Dagħ. The road over the pass is possible for wheels, but rough and difficult. The only measurements available are times noted on an araba journey from Yaly Bayat to Sakyatan Khan. Trocheameter measurements Konia—Gökchü Yaila.

miles (approx.)	h.	m.	
0	0	0	Leave Yaly Bayat and go SW. to pass over Boz Dagħ.
5	1	15	Yaly Bayat bears 54°.
9	1	50	Summit of pass. Hassan Dagħ bears 68°, F.b. 212°.

miles (approx.)	h.	m.	
12	2	40	Foot of pass. Takaly Dagħ bears $270\frac{1}{2}^{\circ}$, Ismil 171° .
14	3	10	Gökchü Yaila (native reckoning of distance to Yaly Bayat, 4 hrs.).
19			Takaly Dagħ bears 275° .
$22\frac{1}{2}$			Sakyatan village.
$27\frac{1}{2}$	6	10	Sakyatan Khan. Hence by Route 45 to Konia.
$38\frac{3}{4}$			

ROUTE 42

KONIA—ARYSSAMA, 83 miles

The direct road, from Konia to Aryssama, deviates from the road to Karapunar (Route 45) at a point not determined E. of Taklyjak Khan. It crosses Boz Dagħ near its southern end by a well-marked pass, easily recognized from the plain to W. and E. which bears 98° from Takaly Dagħ and 286° from Sagh Kale. It crosses Route 64 at Bajanak, Route 53 near Bursal, and coincides with Route 57 (alternative) from Ali Bey Yaila to Aryssama. Trocheameter measurements.

miles	
0	Leave Konia by Route 45.
$6\frac{1}{4}$	Taklyjak Khan. Turn l. from Karapunar road at a point not fixed.
$21\frac{3}{4}$	Kara Kaya Yaila. Many flocks of sheep. The foothills of Boz Dagħ are 3 miles distant. Takaly Dagħ bears $272\frac{1}{4}^{\circ}$. On leaving Karakaya an alterna- tive road from Konia joins (on r.?).
$28\frac{1}{4}$	Cross the road from Yaly Bayat to Karghyn.
$32\frac{3}{4}$	Pass over Boz Dagħ , 240 ft. above level of plain. Takaly Dagħ bears 278° , Sagh Kale 106° . F.b. on leaving pass 60° .
ca. 39	A road branches l. to Genne. (This point is $1\frac{1}{2}$ hrs. by araba from Bajanak.)

miles

45 $\frac{3}{4}$	Bajanak Yaila. Here cross Route 64. Genne bears 280°, Hassan Dagh 69°.
54	Ak Ören Yaila. Karapunar reported 4 hrs. distant. F.b. 110°.
55	F.b. 95°.
56 $\frac{1}{4}$	Sekizli Yaila. F.b. 90°.
57 $\frac{3}{4}$	Chingir Yaila.
60 $\frac{1}{4}$	Turn to ENE. (70°).
63 $\frac{1}{4}$	At top of steep descent. Road turns to r. down hill. Hassan Dagh bears 64°. Aryssama Kale 82°. Sagh Kale 145°.
64	Still descending. A round hill with ruined church on top to r.
64 $\frac{1}{2}$	Bursal Yaila , in the plain.
65 $\frac{1}{2}$	Cross a road (Route 53).
69 $\frac{1}{4}$	A village (Kayaly?). Turn to l.
71 $\frac{1}{4}$	Ishekler Yaila (Kut Burnu?).
72 $\frac{1}{2}$	Seid Ali Yaila.
78 $\frac{1}{2}$	Emir Ghazi village.
83	Aryssama.

Note.—From Konia to pass over Boz Dagh an alternative route has been traversed (no measurements) by **Sakyatan Khan** (Route 45), **Gökchü, Gökchü Yaila** where Takaly Dagh bears 278 $\frac{1}{2}$ °, pass over Boz Dagh 8 9°, Ismil (3 or 5 hrs.) 163°, Yarma 244 $\frac{1}{2}$ °.

ROUTE 43

KONIA—AK SERAI, 95 $\frac{1}{2}$ miles

Except where it crosses the Boz Dagh by a pass 300 ft. above the plain level, this road runs over level steppe all the way. Water is got from wells everywhere except in the neighbourhood of Sultan Khan and of Ak Serai, and at Obruk where the lake supplies drinking water. Some of the wells in the Boz Dagh region are very deep. A small party can get scanty supplies in the villages.

From Konia to Ata Bey Khan the road described is the Ismil road as far as Taklyjak Khan, where a branch road goes to Ata Bey Khan. A more direct road from Konia to Ata Bey Khan, via Pala Velinin Khan, gets water-logged after rain.

From Obruk to Sultan Khan the road chosen depends on the season. The usual road goes via Eshme Kaya, but travellers sometimes strike eastwards to the more southerly route from Ak Ören via Orta Kuyu and Bakalak, to avoid the marshes E. of Eshme Kaya. The distances Konia–Obruk and Ak Khan–Ak Serai are trocheameter measurements. The remainder are calculated from the times taken by four travellers, and from native reports.

miles

0	Leaving Konia (Konak Meidan) follow Route 45 to
6 $\frac{1}{4}$	Taklyjak Khan . Here turn to l.
7 $\frac{1}{4}$	Faslynyn Chiftlik (Taklyjak ?) $\frac{1}{2}$ mile to l.
10 $\frac{1}{2}$	Ata Bey Khan (Sitin Khan) to l.
13	A road crosses.
14	Tümek Yaila $\frac{1}{2}$ mile to l.
14 $\frac{1}{4}$	A road branches to r. Takaly Dagħ bears 261°.
14 $\frac{3}{4}$	A road branches to r.
16 $\frac{3}{4}$	A road joins on l.
17 $\frac{3}{4}$	} Roads cross, joining Sivejik and Aÿ Dört.
18	
18 $\frac{1}{4}$	
19	Sivejik Yaila 1 mile to l.
20 $\frac{1}{2}$	Khan : leave the main road and turn r.
21 $\frac{1}{2}$	Senjirli Yaila (alt. 3,350 ft.). Takaly Dagħ bears 255°, Mahalych 178°. Aÿ Dört Yaila lies 2 miles SW., to S. of Konia road.
23	Rejoin main road.
24 $\frac{1}{4}$	Road from Punar Bashy and Zazadin Khan joins on l.
27 $\frac{3}{4}$	A road crosses.
28 $\frac{3}{4}$	Ak Bash Khan . Takaly Dagħ bears 252·5°. An old khan lies $\frac{3}{4}$ mile to W. Presently the road begins to ascend the pass over Boz Dagħ.
30	A road joins on the r.

miles

- 31 Ruins in a ravine to r. $\frac{1}{2}$ mile distant.
- 33 $\frac{1}{4}$ **Devrent** on r.
- 33 $\frac{3}{8}$ The road is a stone causeway. Highest point (alt. 3,882 ft.). Takaly Dagh, visible for the last time, bears 255.5°. Hassan Dagh appears in front, bearing 85°. Haji Vahab Yaila lies below, to SE.
Forward bearing 70°.
- 37 $\frac{1}{4}$ A road branches r. to Toprakly Yaila. **Haji Omar Yaila** $\frac{1}{2}$ mile to r. (alt. 3,582 ft.).
- 38 $\frac{3}{4}$ Cross the road from Suverek to Karapunar (Route 64).
- 39 $\frac{1}{4}$ A road crosses.
- 39 $\frac{1}{2}$ **Toprakly Yaila** $\frac{1}{2}$ mile to r. in SE. direction. A low hill, running N. and S., rises above Toprakly Yaila.
Forward bearing about 40°.
- 45 $\frac{3}{4}$ **Obruk** (alt. 3,582 ft.). Fair sized village with ruined Seljuk khan. Close by on the NE. is a circular lake about 600 ft. in diameter surrounded by a wall of cliff 100 ft. high. Water fresh and drinkable.
The road goes ENE. round the N. side of the lake and over gently rolling ground.
- 49 A road crosses, coming from a yaila in plain to r. (Yenije Yaila ?).
- 50 $\frac{3}{4}$ **Oklu Khan** (ruined) on l. Well.
- 52 $\frac{3}{4}$ To r. well, 30 ft. deep, with steps leading down to it; 2 ft. of water.
- 54 $\frac{3}{4}$ Well and stable to l.
- 55 A road crosses.
- 55 $\frac{1}{4}$ Group of houses to l. at some distance.
- 55 $\frac{3}{4}$ A road crosses. Presently a road joins (on r. ?).
- 56 $\frac{3}{4}$ Ruins of old khan to r.
- 58 $\frac{1}{2}$ A cistern to l. Presently a road crosses.
- 60 $\frac{1}{4}$ **Eshme Kaya** village, 250 houses, built on a hill. Below the village on the E. a strong stream flows N. in a marshy depression, turning a mill. To the N. stretches a cultivated tract, with grain and vines.

miles

Road crosses the stream and is carried over the marsh in places on an embankment with culverts made of long flat stones. Road cobbled. The plain on both sides is covered with rushes.

61 $\frac{3}{4}$ A low hill to l. ; on the r., a brook and a few trees in the distance.

63 Cross a brook by an arched stone bridge.
Pass between poor barley fields.

66 $\frac{1}{4}$ **Sultan Khan**, a fine Seljuk ruin, visible from far back. In recent years the khan has suffered much at the hands of the peasants who use it as a quarry. A few huts around it. Coming from W., Sultan Khan is visible long before it is reached ; coming from E., it appears suddenly on approach.

Road crosses a marshy depression and a bridge over a stream flowing N. Beyond this is a patch of cultivated ground. There are two parallel roads from this point to Ak Khan. The more northerly passes a well a little beyond half-way. In places there is a causeway raised on an embankment through marshes. No villages reported on this sector.

80 $\frac{1}{4}$ **Ak Khan**, a Seljuk ruin, to r. A large building, with square and circular towers. Well with steps. Turkish cemetery. To l., a hillock.

83 **Toprak Khan**, a roadside shelter, to r. Well of muddy water.

85 Low hillocks to r.

85 $\frac{3}{4}$ Bridge over brook running N. Several villages and chiftliks in plain to N. Direction NE.

90 $\frac{3}{4}$ A cistern to r., beside the road.

92 $\frac{1}{4}$ Cross **Asmak Chai** by bridge, **Aratol Köprü**.
Aratol village lies 1 mile NW.

. 94 Enter gardens of Ak Serai.

95 $\frac{1}{2}$ **Ak Serai**, beside the konak.

ROUTE 44

KONIA—EREGLI, *via* KARAMAN, 130 miles

This is a well-made chaussée, suitable for wheels throughout, and is the usual route to Eregli. It is longer than the road *via* Karapunar, but after leaving the neighbourhood of Konia it runs over higher ground and is less liable to be blocked by inundation. It is followed by the telegraph. Supplies can be got in the irrigated area round Chumra (miles 12 to 32) and in the plains of Karaman and Eregli. The rest of the road runs over desert country.

miles

0 Leaving the Konak Meidan at **Konia** the road goes SSE. through gardens; surface rough, cobbled in places. At

6½ It approaches the railway at **Kara Arslan Khan**. Kara Arslan village lies 2 miles N. The chaussée runs along the E. side of the railway to

12¾ **Kashyn Khan** station. The railway now turns SE., and the road, gradually diverging from it, runs straight to

23¼ **Chumra** village. Chumra station lies 6¾ miles due E.

An alternative road, 11¾ miles long, goes from Kashyn Khan station to Chumra village via **Charyklar** village, 3¾ miles from Kashyn Khan.

The chaussée proceeds via

27¾ **Trissir Yaila** to

30¾ **Tavshan Köprü**, stone bridge over the **Charshembe Su**; khan beside bridge on r. bank.

An alternative road, usually followed, diverges to r. after leaving Chumra and goes via **Ali Bey Huyuk** village, 3½ miles from Chumra village and

- miles
- 8 miles from Chumra station. A sluggish streamlet, crossed by a stone bridge, flows through Ali Bey Huyuk. The village is easily recognized by a low hill in the plain to NE.
- Chaussée now ascends a ridge formed by outliers of the mountains to S., passes a chiftlik, and at
- 35½ Reaches **Gedik Devrent**, zaptieh post at the foot of a hill.
- 36 **Ali Bey Chiftlik** r. and **Deli Osman Chiftlik** l., $\frac{1}{2}$ mile apart. Telegraph on l. Here a road crosses, going from Baljyk Hissar to Aryk Ören (see Route 39). Direction now SSE. The country is bare and waterless, and between here and Kassaba the ruins of several deserted villages lie along the route.
- 37½ Farm and well.
- 39½ A few houses on a hill to r.; still farther to r. **Avdil (Ardul ?)** near the foot of the mountain. Telegraph close to road.
- ca. 40½ Cross road from Güdelisin to Mandasun station, 9 miles due E. (Route 40).
- 43½ A cistern with water.
- 45½ Turkish cemetery on r.
- 49 Turkish cemetery on l.
- 55½ **Gafriat Kassaba**, a large walled village of the early Turkish period, now almost entirely deserted. Village lies under a high chain of mountains on the S., culminating in Haji Baba Dag.
- 57 Cross a slight rise, and enter a small plain. Direction S. then SE.
- 60½ **Ilisera** village, which lies a short distance S. of the chaussée. Rise over a low hill, and enter broad plain of Karaman, almost perfectly flat. Road good.
- 63½ Stone bridge (**Kara Köprü**) over stream flowing N. Telegraph to r. On l., under the foot of the mountain, a village.

miles

- 66 **Dilbean Chiftlik** to r. There are several villages and farms scattered over the plain.
- 74½ **Karaman**, a long straggling town. Leaving Karaman, cross the plain to NE.
- 82½ Old cemetery. To the l., **Eski Güdümen** and **Yeni Güdümen** at some distance.
- 83½ **Jen Hassan Chiftlik**, a small hamlet among willows.
- 85½ Cross a stone bridge ; a little farther on, a well.
- 86½ **Sidrova** village.
- 90½ A subterranean cistern, on the r., reached by 27 steps, and a well. To r. and to l. **Yürük yailas**.
- 94½ The telegraph line crosses the road from r. to l. The road passes near hills on the l.
- 98½ **Ada Tepe Chiftlik**, so called from a small isolated hill in the middle of the plain.
- 101½ **Kurtuma** to r.
- 102½ **Hüyük Burhu** to l.
- 105½ A group of four or five houses.
- 107½ A *devrent* called **Airanjy Chiftlik**, occupied by five soldiers. Immediately after, cross a dry dere by a bridge formed of a single block of stone. The telegraph line is on the l. Direction NE. Pass a defile and enter another wide treeless plain.
- 115½ **Aghyz** to r.
- 118½ **Duajyk (Boyajyk ?)** and the telegraph line to l. Route turns N. to avoid mountain on r.
Pass through a defile and re-enter the plain. Hereabouts alternative road (below) comes in on the l. Direction E. Telegraph line to r. On the l., in the plain two clumps of trees. Road goes along the foot of mountain on r.
- 124½ **Melikli** among trees to r. between the mountain and a little hill nearer the road.
- 125½ Three villages to r., at the foot of the mountain.
Cross a hill at right angles to the road. Slight rise in level. Soil now well watered and fertile.
- 130 **Eregli**.

An alternative road between Karaman and Eregli, coinciding with the above between Karaman and Sidrova and for about $12\frac{1}{2}$ miles W. of Eregli, follows a more northerly course. It is described as follows, from Eregli to Karaman.

miles	
0	Eregli. Road runs over plain, S. of Ak Göl.
$12\frac{1}{2}$	Near the bend on the railway, W. of Alaja Station , this route diverges to r. from Route 44, and follows the shore of Ak Göl.
19	About here is the <i>düden</i> , near the W. end of the lake, by which the flood waters escape.
24	Ambar Arasy or Serpek , site of ancient <i>Sidamaria</i> . A road goes off W. to Choghlu (Route 58, mile $19\frac{1}{2}$), 20 miles distant. Present road continues through Kale Köi . The Divle Su , which flows to Ak Göl, is divided up above Kale Köi for irrigation, and is finally entirely used up.
$26\frac{1}{2}$	Kara Aghach. Then SW. through a low wide pass in the hills, and along the southern slopes of the hills, with the plain of Karaman on the l.
45	Sidrova. Hence, as above.
57	Karaman.

ROUTE 45

KONIA—EREGLI, *via* KARAPUNAR, 92 miles

This road runs over level country as far as Karapunar. The tract between Konia and Ismil is liable to inundation, and wide marshes swamp the roads in winter and spring. In summer the roads afford easy going for wheels. Good landmarks on this route are (1) Takaly Dagh, the more northerly of the twin peaks NW. of Konia; (2) Sagh Kale Dagh, the high peak of Karaja Dagh overhanging Karapunar; (3) Mahalych, the highest peak of Kara Dagh N. of Karaman. Magnetic bearings to these points are inserted where available.

The most direct route from Konia to Karapunar runs

through Yarma and passes about 3 or 4 miles N. of Ismil. The route usually taken branches from this road E. of Yarma and passes through Ismil, which also lies on a road branching from the direct line at Taklyjak Khan and going via Bekir Tolu and Hairi Ogulu.

Supplies are scanty. Water from wells in the villages, at khans, and at regular intervals along the road. The wells are from 6 to 20 ft. deep. The distances as far as Karapunar were measured by trocheameter.

miles

- | | |
|------------------|--|
| 0 | Leaving Konia (Konak Meidan), the road goes eastwards between walled gardens and past the barracks. Entering the level steppe, at |
| 3 $\frac{1}{4}$ | It passes a shelter khan. |
| 6 $\frac{1}{4}$ | Taklyjak Khan . The village Taklyjak lies 1 mile NE. The Konia-Ak Serai road (Route 43) diverges left. |
| 11 $\frac{1}{4}$ | Sakyatan Khan . Takaly Dagh bears 284°. Road now bends more to SE. and crosses a slight rise. Descend to |
| 16 $\frac{1}{4}$ | Sakyatan village, a cluster of mud hovels. Takaly Dagh bears 281.5°. |
| 22 $\frac{1}{4}$ | Yarma village, lying low among marshes. Takaly Dagh bears 284°. |
| 26 $\frac{3}{4}$ | Yavshan Khan . Not far from Yavshan Khan the road forks, one branch going straight on, the other SE. to |
| 33 $\frac{1}{2}$ | Ismil , a large village. Karghyn is visible in the plain to SW. (237°), said to be 3 hrs. distant. Sagh Kale bears 89°. Road now bears 80° for 3 miles, and then turns E. |
| 39 $\frac{1}{2}$ | Sagh Kale bears 91°, Mahalych 182°, the peak beside Genne 16 $\frac{1}{2}$ °, over an intervening pass. |
| 42 $\frac{1}{4}$ | Merdiven Yaila . Well. |
| 44 $\frac{3}{4}$ | Cross a good araba road from N. to S. (Route 58). |
| 46 $\frac{3}{4}$ | Otamysh Yaila . Otamysh village is visible in the plain to S. |
| | Sagh Kale Dagh bears 88°, Mahalych 200°. |

miles

- 59 **Dinek**, a village near the foot of Kara Dagħ. There are many villages dotted over the plain to the E.
- 61½ **Kulbhassan Oba**, sheepfolds.
- 63½ Opposite **Kulbhassan** village, to r. The ground here is marshy, and marshes extend eastwards to Sidrova.
- 73½ **Karaman Station**, on the Baghdad Railway.
- 74½ **Karaman** town. (See Gazetteer, p. 275.)

ROUTE 47

SULTAN KHAN—INEVI, 50½ miles

This road goes over marshy ground, possible for wheels only in summer, on the west side of the Tuz Göl.

miles

- 0 **Sultan Khan**. F. b. 315°.
The road passes through cultivated fields near Sultan Khan, and enters the steppe, with patches of cultivation here and there.
- 3 Enter a depression, and cross a dry river bed by a stone bridge.
- 8½ Cross the stream coming from Eshme Kaya and flowing NE. to Tuz Göl and enter **Bouat**, or **Hüyük Dibi**, or **Deveyuklu**, village of 25 houses beside a mound 100 ft. high. Eski! bears 340°.
- 11½ Road passes a well and a few houses r.
- 15½ Reach **Eski!** village, 500 houses, with wide streets. Immense cemetery. Road now turns W. and crosses a marshy area on a raised stone embankment.
- 19½ **Tuzun** village, 30 houses.
- 21 Pass a spring on r. and a little farther on a deep well on l. Vegetation presently ceases and gives way to a crust of salt.
- 31 Cross a depression between two marshy lakes, dry in summer.

miles

34½

Dondurma, large Kurd village. Half an hour to NE. lies **Tossun**, a station of the Régie, with a mudir and zaptiehs. The shore of the lake is ½ hr. distant from Tossun.

Road goes round E. side of Murad Su Göl, a salt lake with slightly elevated banks, joins the valley of the stream from Insuyu six miles below Inevi, and follows it to

50½

Inevi.

ROUTE 48

CHESHNIR KÖPRÜ—KOCH HISSAR, 59 miles

Passable for wheels. Distances depend on dead reckoning.

miles

0

Köprü Köi, a Circassian village on r. bank of Halys, beside Cheshnir Köprü. Cross river by Cheshnir Köprü, and follow the Angora chaussée for a short distance. Turn l. from it (1 mile) near **Karakechili**, 200 houses, which lies about 1 mile to l., down the slopes. Road climbs the flat ridges of the mountain on r. and crosses a monotonous plateau lying behind the hills on the l. bank of the Halys. General direction S.

15

Haji Bekir village (Kurds).

20

Haji Bekir village (Kurds), the residence of a Kurdish Bey.

Country becomes more hilly. Road goes S. through cornfields, past the cemetery.

22

Shedit Hüyük, a Turkmen village round an isolated hill ½ hr. to l.

22½

Shedit Hüyük, a Tatar village at the foot of Ala Dag. Enter a valley surrounded by hills and mount Pasha Dag, a ridge extending E. and W. with three peaks. At the foot of Pasha Dag, on NW. side, lies **Kainar Köi**, a small village.

miles

- 48 $\frac{3}{4}$ **Yilekli Devrent**, police post. Well.
- 52 $\frac{1}{4}$ **Ak Kuyu Yaila**. Well.
- 55 $\frac{1}{2}$ **Beljik Yaila**. A low range, Uzejik Dagħ, lies NE.
 . Road bends SE., and descends a slope into plain
 of Karapunar. Terrain, which has been steppe up
 to this point, now strewn with dark coloured lava.
- 58 $\frac{1}{2}$ Well. Sagħ Kale Dagħ bears 89°. Three yailas lie
 in the plain NE.
- 62 $\frac{1}{2}$ **Karapunar** at the khan.
 Hence by Route 64, in the reverse direction, to
- 92 **Eregli**.

From **Ismil** to **Taklyjak Khan**, the more southerly
 branch is described as follows. Trocheameter mea-
 surements.

- 0 Leave **Ismil** by a road pointing straight at Takaly
 Dagħ as far as
- 10 $\frac{1}{2}$ **Hairi Oghlu** village. Road now turns more to N.
- 12 $\frac{1}{2}$ A road goes off r. to Bekir Tolu village.
- 13 $\frac{3}{4}$ **Bekir Tolu** village lies 1 mile to r. Road now turns
 direct to Konia, afterwards turning more to N.
- 16 **Shatyr** village.
- 18 $\frac{3}{4}$ Takaly Dagħ bears 287°. Road still points to N.
 of Takaly Dagħ.
- 22 $\frac{3}{4}$ **Shatyr Khan**. Takaly Dagħ bears 285 $\frac{1}{2}$ °, Konia 283°.
- 26 $\frac{1}{4}$ **Taklyjak Khan**.

ROUTE 46

KONIA—KARAMAN, *via* MADEN SHEHIR, 74 $\frac{3}{4}$ miles

This road is fit for wheels, but can be used only in dry
 weather, as it passes over some of the lowest parts of the
 Konia plain. From Konia to Seidi Köprü the most direct
 road is by Kevran Serai Khan and Dedem Oghlu; the route

detailed below avoids the marshes in the vicinity of Dedem Oghlu. Trocheameter measurements.

miles

- 0 **Konia.** Follow Route 44 to Kashyn Khan.
- 12 $\frac{3}{4}$ **Kashyn Khan.**
- 15 $\frac{3}{4}$ **Chümek Yaila.**
- 22 $\frac{3}{4}$ **Fetiye** (Tatar Kõi ?).
- 27 $\frac{1}{4}$ Cross the Charshembe Su by **Seidi Köprü.**
- 35 $\frac{1}{2}$ Opposite **Üch Hüyük**, a mound near a village.
- 38 $\frac{1}{2}$ **Tash Aghyl.** The road approaches the foothills of Kara Dagħ.
- 43 $\frac{1}{2}$ **Yilanly**, a village in a valley near a peak (to r.) called **Kyzyl Dagħ.** After passing Kyzyl Dagħ the road ascends a rocky pass, leading to the plain below Maden Shehir.
- 45 $\frac{1}{4}$ End of pass. Road now lies in the plain, skirting hills on r.
- 52 $\frac{1}{4}$ **Maden Shehir** or **Bin Bir Kilisse**, a Yürük village in a valley facing N. among the ruins of a Byzantine town. Water in cisterns, very foul. The nearest running-water is a spring in the hills, 2 or 3 miles distant.

An alternative road from Maden Shehir to Konia goes to Aryk Ören Station, and follows the chaussée along the railway. The following trocheameter measurements were made along it: **Maden Shehir** (0 miles), **Kyzyl Dagħ** (8 $\frac{1}{2}$ miles), **Aryk Ören Station** (18 $\frac{1}{2}$ miles), **Okjylar** (Alan Okjy) (27 $\frac{1}{4}$ miles), **Chumra Station** (by a detour) (31 $\frac{1}{4}$ miles), **Kara Arslan** (53 $\frac{3}{4}$ miles), **Konia** (56 $\frac{3}{4}$ miles).

The road climbs to a col S. of the valley connecting the main mass of Kara Dagħ with an outlier, the Kyzyl Dagħ.

- 53 $\frac{3}{4}$ Summit of col. Road descends into the plain of Karaman.

miles

27 $\frac{1}{2}$

Reach the summit.

Road runs down a long outlier of Pasha Dagħ, in view of the plain, cultivated here and there, which borders Tuz Göl on the N. It passes within a mile of the northern corner of the lake, and follows the shore for a short distance to

41 $\frac{1}{4}$

Bash Khan, an office of the *Dette Publique*, which deals with the salt monopoly.

Leaving Bash Khan, road first skirts the lake, until the hills of quartz and mica schist, which gradually increase in height, recede on the l. Road then skirts the hills, leaving the lake on r.

59

Koch Hissar, 300 houses, lying among orchards and vineyards.

ROUTE 49

KOCH HISSAR—CHYKYN AGHYL, 26 $\frac{3}{4}$ miles

Same remarks as under Route 48

0

Leaving Koch Hissar, road first goes towards Tuz Göl and then turn sharp to the r. and mounts a wide ravine planted with trees and vines, down which runs a stream. Road on r. bank.

6 $\frac{1}{4}$

Cross the stream by a stone bridge of 2 arches. Here the ravine forks into two gulleys, with brooks, one coming from the direction of Ekejik Dagħ, the other from the direction of Sherifli Dagħ.

Pass large threshing floors.

8 $\frac{3}{4}$

Sanemi to r. and **Karabyk** to l., Turkmen villages.

Reach a height. Last view of Tuz Göl. Panorama of Halys appears in front. **Ibrahim Beyli** village 1 mile r.

13 $\frac{1}{2}$

Ruins. Descend gentle slopes of Koja Dagħ past **Yeni Toren Obasy** (r.).

miles

- 17 $\frac{3}{4}$ A road to Nev Shehir diverges to r.
 19 $\frac{3}{4}$ **Yeni Yapan Obasy.** Here cross Route 59.
 Hence down a fertile valley, watered by a stream to
 r. of road to
 26 $\frac{3}{4}$ **Chykyn Aghyl.**

ROUTE 50

AK SERAI—KOCH HISSAR, *via* Tuz GÖL, 56 miles

Distances approximate.

- 0 Leaving **Ak Serai** road crosses Beyaz Su, which
 flows SW. through the town, by a good stone bridge;
 10 **Ajem Köi**, near a rising ground. Road level and
 good, but very dusty.
 Direction NNW.
 17 **Yaila of Serai Köi**, which lies on the road 2 miles
 N. There is no fresh water between here and Koch
 Hissar.
 29 Come in sight of Tuz Göl, with shallow, muddy
 shores, covered by a thick incrustation of salt.
 Three small islands 2 miles from the shore. One is
 said to have a spring of fresh water (?).
 The hills on r. gradually approach the lake, leaving
 only a narrow pass between it and the cliffs. In
 places this pass opens out into a plain. No cultiva-
 tion. As Koch Hissar is approached, road draws
 away from lake and runs between cornfields.
 56 **Koch Hissar.**

The maps show a village **Chardak** on this road, 7 miles N. of Serai. It is not mentioned by the traveller whose notes have been used. A large village near the lake, considerably to the N. of the Chardak of the maps, was seen by British officers who escaped from Yozgad in 1918.

ROUTE 51

PARLASSAN—AK SERAI

This road has not been explored. From Parlassan its line is visible for miles, running SSE. between the ridge that bounds Tuz Göl and Ekejik Dagħ. Deve Kovan (5 hrs. from Parlassan) and Yagħmur Hüyük (10 hrs.) are reported on the road. It was further reported as going over Pechinek Ovasy (immediately S. of Parlassan) and passing Kadyňjyk, Fadyly, Deve Kovan, Kürimini, Sofular, Oinaghach, Büyük, and Küchük Boyalyk (the last three under Ekejik Dagħ). This road evidently coincides in part with Route 52.

ROUTE 52

AK SERAI—KOCH HISSAR *via* OINAGHACH, 58 miles

Leaving Ak Serai, the road goes NW., along the foot of low hills on r. and continues over hills and valleys with numerous villages, with Ekejik Dagħ on r. Springs are frequent. After 6 hrs. (reckoned 15 miles) reach the highest point and about 15 miles farther on another high hill on which is **Oinaghach** village. Hence along a parched valley with a single spot of verdure, where a small stream runs through it. After ascending a high hill, see Tuz Göl in the distance. Descend into the plain, and proceed NW. along the base of the hills to Koch Hissar. The following distances are available along this route :

miles	
0	Ak Serai.
14½	Mürgüz.
18	Boyalyk.
23½	Yaila.
30	Oinaghach.
38½	Bürdian.
45	Deve Kovan.
51	Karanghe Dere.
58	Koch Hissar.

ROUTE 53

KARAPUNAR—AK SERAI, *via* AK KHAN, 64 $\frac{1}{4}$ miles

This road has been measured by trocheameter. It goes N. from Karapunar, crossing the hills W. of Tuzlu Göl, and joins Route 43 (Konia to Ak Serai) near Ak Khan. The road goes over undulating steppe land; water from wells; no supplies.

miles

0	Leave Karapunar by Konia road, and turn N.
7 $\frac{1}{4}$	Seib Haji Yaila.
12 $\frac{1}{2}$	Yazlyja Yaila.
15 $\frac{1}{4}$	Yazomja Yaila. Near here cross Route 42.
22	Kokar Köi.
24 $\frac{3}{4}$	Besji Yaila. Here cross Route 57 at mile 60.
	F. b. 355°.
29 $\frac{1}{4}$	Rising ground. Sultan Khan is visible, bearing 351°.
30 $\frac{1}{4}$	Haji Suleiman Yaila , or Tumu Yaila (of Sultan Khan). Hassan Dagb bears 89°, Aryssama Kalc 131°.
	A road strikes off NW. to Sultan Khan. The following trocheameter measurements were made along it:

miles

0	Haji Suleiman Yaila.
1	Haji Musa Yaila. F. b. 325°.
2	Yenije Oba , ruins and cemetery.
2 $\frac{1}{2}$	Cross a Konia—Ak Serai road.
2 $\frac{3}{4}$	Ok Öyük. Small lake.
4 $\frac{3}{4}$	Pass a spring running towards lake. A village, Aryshtya , to l.
6 $\frac{3}{4}$	A village to l. Chalak Tepe , small hill, to r.
8	Ishekaya Sazy. Great marsh all along road.
8 $\frac{1}{2}$	Pass a spring, Aryshtya Punar.
9	Baghlyja village. F. b. 35°.
ca. 12	Sultan Khan.

miles

- [The last stage was not measured. The distance was given as 1 hr.]
- 32½ Join a road from Konia to Ak Serai, and turn r. along it.
- 33¼ **Malyr** or **Dede Punar Yaila**, close to a large pointed mound. Hassan Dagħ bears 94°. F. b. 25°.
- 36¼ A road branches r., reported to go to Inje Su.
- 40¾ A road from Konia joins on l. F. b. 45°.
- 48 **Amarat Yaila**. Amarat village, 3 miles distant, bears 350°.
- 49 **Ak Khan**. Hence by Route 43 to
- 64¼ **Ak Serai**.

ROUTE 54

KARAPUNAR—AK SERAI, *via* KOLAK, 60 miles

This road was traversed by an old traveller, who reports that it first crosses a succession of valleys and low elevations, and then traverses a level plain to Ak Serai. Water is scarce. The first part of the road, up to Kulaly, has been measured by trocheameter, and the road was crossed at Kolak Yaila, about 7 miles farther on. Thereafter the road probably passes near Inje Su (3 hrs. N. of Olukman), which was reported to lie on a road noted under Route 53, mile 36¼.

miles

- 0 Leave **Karapunar** by the chaussée which forms the first part of the route to Eregli (Route 64), and branch to l. 3 miles after leaving the town. Cross a marshy plain to S. of Tuzlu Göl, skirting foothills of Karaja Dagħ.
- 5 Karapunar bears 253°. Road now turns more to NE.
- 11 **Syrchaly Yaila** to l. A road goes off r. to Güchi-kyshla, visible on foothills to r.
- 13 **Yalma Yaila** l. and an old mosque r.

miles	
14	Chatuptama Yaila l.
16 $\frac{3}{4}$	Kayaly Yaila on both sides of road. (From Kayaly two roads go to Emir Ghazi. (1) One goes NE. over the plain, mounts the ridge, reaching the top at 3 miles, Haji Bekir Yaila at 6 miles and Emir Ghazi at 7 $\frac{3}{4}$ miles. (2) The other goes along the plain bearing 20°, reaches Kurt Burun Yaila 3 $\frac{1}{4}$ miles, Seid Ali Yaila 4 $\frac{1}{4}$ miles (see Route 42, mile 72 $\frac{1}{2}$). Road then turns gradually to NE. to 5 $\frac{1}{4}$ miles and then turns to 110° and reaches Emir Ghazi 10 $\frac{1}{2}$ miles.)
20 $\frac{1}{4}$	Kulaly Yaila. Beyond this point, road has not been measured. It was crossed at Kolak Yaila ca. 27 miles, whence it goes NE. to
ca. 60	Ak Serai.

ROUTE 55

AK SERAI—EREGLI, 73 miles

The direct road from Ak Serai to Eregli measures about 60 miles. It has been measured by trocheameter from Ashagha Assar to Agrikert Khan, and from Kut Ören to Eregli, and it was crossed $\frac{1}{2}$ mile W. of the yaila of Aryssama noted under mile 33 $\frac{1}{2}$ of Route 57. It is fit for wheels. The road detailed below diverges E. of the direct line between Ak Serai and Ashagha Assar and W. of the direct line between Aryssama Yaila and Kut Ören. As the measurements round these détours are accurate, they are given in preference to estimated measurements along the direct road. The point where the direct road is joined S. of Aryssama is not determined, but it must be near Kut Ören.

miles	
0	Ak Serai , beside the Konak. Road passes through gardens E. of the town, and turns SSE.
2 $\frac{3}{4}$	Pass a good well to r. Hassan Dagħ bears 159°.

- miles
- 5 $\frac{1}{4}$ Two villages visible in plain to W.
- 5 $\frac{3}{4}$ Road goes on over the hills to E. of plain. Turn
r. over fields.
- 6 $\frac{1}{2}$ Join road going SE. (to Halvadere ?) and turn l.
along it.
- 8 $\frac{1}{2}$ **Assar** village, lying NE. of road at entrance to
a ravine going E. Yokary Assar lies on hills to N.
Turn SW., cross Halvadere road, and at
- 10 $\frac{3}{4}$ Join direct road from Ak Serai, which branches
here, one branch going E. round an isolated hill, the
other going towards Ashagha Assar.
- 11 **Ashagha Assar** village lying on N. side of an
isolated hill at the foot of Hassan Dagh which bears
152°. [Just before reaching Ashagha Assar, a road
branches l. to Karaja Ören, 2 $\frac{1}{2}$ miles from Ashagha
Assar, in a wooded valley on the side of Hassan Dagh.]
- 14 Pass a well.
- 15 $\frac{1}{2}$ Old cemetery and mound to r. Three villages
visible on slopes of Hassan Dagh to SE.
- 17 $\frac{1}{4}$ A road goes off r. to **Tash Punar** village, under
a ledge which runs N. and S. parallel to our road,
passing a fountain half-way.
- 17 $\frac{3}{4}$ A road crosses, coming from a village on Hassan
Dagh, and going to Tash Punar via the fountain.
- 18 A road crosses from Hassan Dagh to Tash Punar.
- 19 A road branches l. to Karaja Ören, on slopes of
Hassan Dagh.
- 22 $\frac{1}{2}$ A road crosses, coming from Karaja Ören.
- ca. 25 $\frac{1}{4}$ **Agrikert Khan** to l. Ruined. Hassan Dagh bears
86°. [From Agrikert Khan to the yaila at mile 33 $\frac{1}{4}$ of
Route 57 the distance, measured from the map, is
about 5 miles.]
- ca. 30 $\frac{1}{4}$ **Aryssama Yaila**. Road now coincides with Route
57 to
- ca. 39 $\frac{3}{4}$ **Aryssama** village. Road skirts eastern foothills of

miles

- Karaja Dagħ, and enters a level plain extending to Eregli.
- 44½ **Kut Ören** village lying due E. of the NE. peak of Karaja Dagħ. Road goes S. over plain.
- 53½ Pass **Kara Agha Yaila** (belonging to Kut Ören) on l.
- 63½ **Chiller** village.
- 65½ Stone bridge over **Hajilar Köprü Su** flowing W. to Ak Göl. A village, Gügteme, 1 mile to l.
- 66½ **Imarie**, a muhajir village. On leaving, cross a river by stone bridge:
- 73 **Eregli**.

ROUTE 56

AK SERAI—KAISARI, 98½ miles

The route detailed below crosses a rocky plateau, furrowed by *deres* with perpendicular sides, which extends from Hassan Dagħ to Erjies Dagħ. It is doubtful how far this road is fit for wheels; a wagon road exists in this neighbourhood, and probably coincides in the main with the present route.

miles

- 0 **Ak Serai** (see Gazetteer, p. 265). The road ascends the southern side of a valley, with a stream flowing W. to Ak Serai.
- 14 **Selme**, situated in a deep gorge. The river rises full grown in the gorge. E. of Selme. **Ikhlara** is across the valley from Selme. Road ascends the valley side, and crosses open country.
- 18 **Alayut**.
- 19 The road crosses a stream flowing r. to l.
- 22 Cross a second stream flowing r. to l.
- 32 **Kuyulu Tatlar**, a village called after 12 or 15 wells, close together.
- 41 **Melegob**, a large village, inhabited by Greeks. Road ascends a rise, and crosses an elevated plateau,

miles

extending to Develi Kara Hissar, and broken up by *deres*.

53 **Bash Kõi**, near the head of a valley leading to the Kaisari-Nigde road. The road goes down this valley, SE.

55 **Orta Kõi**, a Greek village.

58 Join Route 63 opposite Zengibar Kale.

63 **Develi Kara Hissar**. Hence by Route 63.

98½ **Kaisari**.

An alternative route, of which no details are available, leads from Ak Serai to **Nev Shehir** on Route 59, and thence to Kaisari. In length it must be roughly equal to the road described.

ROUTE 57

BOR—SERAI ÖNÜ, 138½ miles

This is the most direct route across the heart of the Lycaonian steppe. From Ulu Ören to Serai Ini it has been traversed and measured by trocheameter. The distance from Bor to Orta Kõi is reckoned from the time taken by an old traveller (3½ hrs.); that from Orta Kõi to Ulu Ören is taken from the map.

The road skirts the foothills of Melendiz Dag and Hassan Dag, strikes across the plain to Aryssama Dag, round both sides of which it throws branches. These branches meet at Besji, and the road then proceeds by Obruk and Suverek.

Water is got from wells and supplies are scanty.

From Bor to Emir Ghazi a more direct road, running S. of that detailed, is said to take 14 hrs. It has not been explored.

miles

0 Leave **Bor** and go NW. over the plain.

2 Pass a small lake, from which a stream flows SW.

Road keeps to r. of direct line to Orta Kõi, to avoid swamps in the plain.

miles	
8½	Leave the plain and ascend among rocks.
12½	Orta Köi , a large Turkish village well up on the SW. outliers of Melendiz Dagħ, surrounded by well-watered gardens.
ca. 21	Ulu Ören village in a valley open to S. at the foot of Hassan Dagħ, the peak of which bears 341°.
23¼	Kara-ang Kapu village, at the foot of Hassan Dagħ. Peak bears 7°.
25½	Chukurken village to r. in a recess below the spur which runs SW. from Hassan Dagħ. Above it, to the W. is a Byzantine fortress. Road rounds the spur over undulating ground.
33¼	A yaila of Aryssama to l. Aryssama Dagħ bears 241°, Hassan Dagħ 45°.
33¾	Cross the Ak Serai-Eregli road (Route 55).
34¼	Pass a line of boundary stones (?) stretching over the plain from N. to S.
36	A yaila of Aryssama to r.
38¼	A road branches l. to a yaila 2 miles distant.
38¾	Road forks, l. branch going to Aryssama (see below) and passing a yaila about a mile distant. Present route follows the r. branch.
39¼	Cross the road Ak Serai-Aryssama which, on the l., presently joins the road referred to under mile 38¾. Present road keeps to the N. side of Aryssama Dagħ.
40½	Cross a road, and presently cross a second road. (From this point to Palta Dushen the road was missed several times. The trocheameter measurement (7¼ miles) is therefore excessive. The distance given is estimated from the map.)
45¼	Palta Dushen Yaila , lying in the plain off the NW. corner of Aryssama Dagħ. Aryssama Kale bears 151½°, Hassan Dagħ 60°. F. b. 282°.
46¼	Öyüklü Yaila . F. b. 279°.
47¼	Ortaja Yaila .

miles

- 50 $\frac{1}{4}$ **Kolak Yaila** on l. This yaila is broken up into groups scattered over the plain.
- 50 $\frac{3}{4}$ Part of **Kolak Yaila**. Cross the Ak Serai-Karapunar road (Route 54). **Chandyr** village lies 3 miles SE., in a hollow.
- 52 $\frac{3}{4}$ Pass a khan. Aryssama Kale bears 133°.
- 54 $\frac{1}{2}$ **Olukman Yaila** (of Emir Ghazi). Aryssama Kale bears 125 $\frac{1}{2}$ °, Hassan Dagh 75 $\frac{1}{2}$ °.
- 55 $\frac{1}{2}$ Slight ascent, giving view of villages in plain to W. and SW. F. b. 275°.
- 60 **Besji Yaila**. Aryssama Kale bears 119°, Sagh Kale 161°. Here the roads Sultan Khan-Karapunar and Ak Serai-Genne-Konia cross. Karapunar reported 7 hrs. distant, Sultan Khan 4 hrs., Genne (via Karakol) 8 hrs. F. b. 280°.
- 60 $\frac{1}{2}$ Pass ruins on l. Presently a road branches to l. F. b. 278°.
- 64 **Butajy Yaila** on r. F. b. 291°.
- 65 $\frac{1}{4}$ Ruins of village. F. b. 320°.
- 66 $\frac{1}{2}$ **Karakol Yaila**. Hassan Dagh bears 82°. On leaving Karakol Yaila, two roads go off to l. F. b. 299°.
- 68 Road turns more to N. F. b. 303°.
- 70 **Sekirler Yaila**. A road goes off to Genne, SW. F. b. 309°.
- 71 Ruins of village. F. b. 260°.
- 72 $\frac{3}{4}$ A road crosses, going to **Haji Abd er Rahman Yaila** $\frac{1}{2}$ mile l.
- 73 $\frac{3}{4}$ **Mesgitli Yaila** beside a low mound.
- 74 $\frac{1}{4}$ A road branches to l. In the fork, ruins of a village.
- 75 **Dayi Gözü Yaila** surrounded by traces of ancient ruins. F. b. 298°.
- 76 $\frac{1}{2}$ **Haji Mejid Yaila**. Hassan Dagh bears 85°, Genne Hill 207°. F. b. 290°.
- 80 **Hüyüklü Yaila**. F. b. 306°.

miles	
80 $\frac{1}{4}$	A road branches to l.
80 $\frac{1}{2}$	A road crosses at right angles.
81	A road crosses. Presently a road forks to r., going to fields.
82 $\frac{1}{4}$	Cross a road Sultan Khan-Konia, which goes SW. to Ak Ören.
85 $\frac{1}{4}$	Gözboghan Yaila. Hassan Dagb bears 92°. Outside the yaila, a road forks to r.
85 $\frac{3}{4}$	Cross road from Kyz Ören Yaila l. to Bashgetiren Yaila r. F. b. 332°.
89	Obruk , at the khan. F. b. 300°.
92	Two roads cross from S., and converge on yaila $\frac{1}{4}$ mile to r. (Kolja Yaila ?).
96	Road from Eshme Kaya joins on r. and a road runs SSW. to Kara Dushen Yaila, 2 miles distant.
96 $\frac{3}{4}$	A road goes off l. to Kara Dushen Yaila.
98 $\frac{3}{4}$	A road (from Eshme Kaya ?) joins on r.
100 $\frac{1}{2}$	Boruk Kuyu Yaila.
101	Part of Boruk Kuyu Yaila. F. b. 300°.
102	Cross road from Ak Ören to the Mernek pass.
106	Akja Shahr village.
	Hence by Route 64 to
138 $\frac{1}{4}$	Serai Önü.

ALTERNATIVE ROUTE FROM m. 38 $\frac{3}{4}$ —BESJI (m. 60) *via*
EMIR GHAZI

Except for the section from mile 38 $\frac{3}{4}$ to Aryssama (measured from the map), this route has been measured by trocheameter.

miles	
0	Take l. branch of fork at mile 38 $\frac{3}{4}$, pass a yaila, and at
ca. 4	Reach Aryssama village, lying at the eastern end of the corridor between Karaja Dagb and Aryssama Dagb. Road traverses the corridor. F. b. 255°.
8 $\frac{1}{2}$	Emir Ghazi village, on the site of an ancient town

miles

- at the SW. corner of Aryssama Dagħ. Water very bad. Large artificial underground caves. Several yailas of Emir Ghazi dot the plain to W. A road goes to Palta Dushen, $4\frac{3}{4}$ miles. Road goes WNW. over undulating ground formed by outliers of Karaja Dagħ.
- 13 $\frac{3}{4}$ **Seid Ali Yaila.** The road to Karapunar goes off l.
- 14 $\frac{1}{4}$ **Seid Ali Yaila.** A third yaila of Seid Ali lies a short distance to S. Road goes W.
- 15 $\frac{1}{2}$ **Güyesli Yaila.** F. b. 316°.
- 16 A road branches to r. F. b. 308°.
- 18 $\frac{1}{4}$ **Bash In (Haji Ismail Yaila).**
- 20 **Halil Yuldu Yaila.** A road goes off l. to Syghyrak Yaila.
- 21 $\frac{1}{2}$ A road branches to r.
- 23 $\frac{1}{2}$ A yaila. F. b. 315°.
- A road branches l. just before
- 26 $\frac{3}{4}$ **Besji Yaila.**

ALTERNATIVE ROAD KARAKOL—OBRUK BY BAKALAK

Trocheameter measurements

miles

- 0 Leave **Karakol.** F. b. 335°.
- 1 Pass a cemetery.
- 2 $\frac{1}{2}$ **Güzelli Yaila**, belonging to Karly Oghlu of Eshme Kaya. F. b. 320°.
- 3 $\frac{3}{4}$ **Karaburun Yaila.** F. b. 325°.
- 4 $\frac{3}{4}$ Cross a much-used road coming from SW. (doubtless a road from Konia to Ak Serai).
- 6 $\frac{1}{2}$ **Jafer Bey Yaila.** A road goes NE. to Baghlyja, said to be $1\frac{1}{4}$ hrs. distant. F. b. 317°.
- 7 $\frac{3}{4}$ Cross a road from Konia to Ak Serai.
- 8 A road joins on r.
- 8 $\frac{1}{2}$ **Bakalak Yaila**, on a road from Konia to Sultan Khan. F. b. 344°.

miles	
10	Mustafa Effendi Yaila , belonging to Eskil. The road to Eskil passes through Eshme Kaya. Sultan Khan reported $4\frac{1}{2}$ hrs. NE. F. b. 303° .
13 $\frac{1}{2}$	Boghche Mahmud Yaila . (Between the last two yailas a road branches to l. near the entrance to a pass, and goes to Obruk via Göljik Yaila and Yeniye Yaila.)
15 $\frac{1}{2}$	Pass a cemetery. F. b. 280° .
16 $\frac{3}{4}$	Bilejik Yaila . F. b. 280° .
18	Oklu Khan . Hence by Route 43 to
23	Obruk .

ROUTE 58

KARAMAN—GENNE, 53 miles

This road is fit for wheels throughout. It crosses the plain of Karaman in a northerly direction, passes between the Kara Dagħ and the Soghla marsh, rises over the eastern outliers of Kara Dagħ, and strikes N. over the level plain. Except between Dinek and Choghlu, where the distance is measured from the map, and should possibly be a mile or two longer, the distances are trocheameter measurements. The southern part of this road coincides with the road from Konia to Karaman (Route 46). No supplies. Water from wells.

miles	
0	Leave Karaman .
1 $\frac{1}{8}$	Cross the railway at Karaman station, and cross a level plain, with marshes to r. and Davda Dagħ to l.
10	Kulbhassan village lies l. of road, Hamidie village r.
11	Cross Kara Köprü Su by Panjar bridge. Road goes between marshes.
11 $\frac{3}{4}$	Culvert over the marsh.
13 $\frac{1}{4}$	Kulbhassan Oba (sheep folds) on r.
15 $\frac{1}{8}$	Dinek village. Route 46 goes off l. to Maden Shehr.

miles

- Proceed over plain between Kara Dagħ and Chakyr Dagħ. Marsh has now ceased.
- 19½ **Choghlu** village. From Choghlu to Jinnli Ören road passes through foothills of Kara Dagħ, with easy gradients.
- 23 **Chigil** village 1 mile to r. A village **Yeni Kuyu** lies NE. of this village, 2 miles farther on.
- 24 **Gameni** village. Karapunar reported 6 hrs. journey distant.
- 25 Road goes on to Karapunar. Our road turns to l.
- 26 **Kara Kyshla** village. F. b. 340°.
- 28½ **Jinnli Ören** village.
- 29½ A road goes off to **Ishlik** village, 3 miles to r.
- 31¾ **Hassan Obasy**, a yaila of Otamysh.
- 35¾ **Otamysh Yaila** (new in 1910) ½ mile to r.
- 39¾ Cross Konia-Karapunar road (Route 45).
- 40 **Esenni**, yaila of Otamysh.
- 45 **Orta Oba**, yaila of Otamysh. Ruins of Byzantine church.
- 47¼ **Chukur Kuyu**, yaila of Otamysh.
- 53 **Genne**.

ROUTE 59

ANGORA—KAISARI, *via* NEV SHEHIR, 202½ miles

The roads from Angora to Konia, Ak Serai and Kaisari coincide as far as a point ½ mile E. of Chatal. At this point, the chaussée to Kaisari via Cheshnir Köprü and Kyrshahir branches eastwards. At Aghaboz, 5½ miles farther S. the road to Kaisari via Nev Shehir or to Ak Serai forks from the road to Konia. The Kaisari and Ak Serai roads coincide as far as Parlassan, E. of Koch Hissar, where the Kaisari road strikes ESE., and the Ak Serai road SSE.

Water is plentiful except between Abbasly and Parlassan where the road traverses arid undulating country. With the same exception, there are many small villages along the road.

From Angora to Aghaboz the road has been measured by trocheameter. It is fit for wheels throughout. From Aghaboz to E. of Koch Hissar it has been surveyed on separate occasions by two travellers, whose measurements (time reckonings) agree almost exactly. From the latter point to Kaisari the measurements are less precise.

miles

- | | |
|-----|--|
| 0 | From Angora , proceed by Route 5 to Aghaboz. |
| 26 | Aghaboz village, near the head of the Tabanly Su valley (see Route 61). Road goes eastwards down valley of tributary stream in which are traces of a Roman road. |
| 28½ | Turn SE. over hills. |
| 31½ | Cross a second streamlet, and turn E. along it. |
| 33½ | Cross a stream. Sharshak lies 1 mile N. |
| 34½ | Cross a stream and rise over low ridge. Direction ESE. |
| 35½ | Top of ridge. Turn S. and descend. |
| 36½ | Cross a stream. |
| 37½ | Abbasly village, on a stream. Direction now SE. |
| 39¾ | Begin to mount Kartal Dagħ, beside source of a stream. All the above streams flow E. or NE. to join Tabanly Su. Kartal Dagħ is the watershed between the Tabanly Su valley and that of the Aÿ Özü river, which enters the Kyzyl Irmak at Cheshnir Köprü. |
| 41½ | Top of pass. Descend beside Aÿ Özü stream, flowing SE. Easy road. Railway from Angora to Kaisari was planned to pass this way. Direction SE. as far as Shedit Hüyük. |
| 46 | Brook comes in on r. |
| 53½ | Karaburun village (Tatar) 1½ mile to SW. Here cross Aÿ Özü river and enter undulating ground. |
| 57¼ | Cross a stream flowing NE. |
| 60¾ | Shedit Hüyük village. A road goes due S. to Koch Hissar (Route 48). Turn SE. up slopes of Pasha Dagħ. |

miles

61 $\frac{3}{4}$ **Tatar Köi.** Hence ESE. over Pasha Dagħ.64 $\frac{1}{2}$ Pass a yaila.66 $\frac{1}{2}$ Down in plain. Turn to SE.72 **Haji Tahyr** village, to E. of road.80 $\frac{1}{2}$ **Fesul Agha Chiftlik.**82 $\frac{1}{2}$ Road to Chykyn Aghyl forks l.85 **Mulkus Obasy.**87 $\frac{1}{2}$ **Parlassan.**

(The traveller's estimate of the direct road Shedit Hüyük—Parlassan is 22 miles. He went by Haji Tahyr, making a detour.)

Parlassan occupies a fine situation near the head of a valley running along the W. side of Kara Senir Dagħ, copiously supplied with water.

89 **Palas.**91 **Ishekli.**92 **Haidarly.**93 $\frac{1}{2}$ **Deliler.**97 $\frac{1}{2}$ **Yeni Yapan Obasy.** Here cross Route 49.98 $\frac{1}{2}$ **Demirji.**105 $\frac{1}{4}$ **Boghaz Köi.** Direction E.

Cross a deep ravine and descend over granite hills ; on the l., the plain of Ak Punar.

111 $\frac{1}{4}$ Reach plain of Ak Punar, extending from SE. to NW. and bounded on NE. by Bazyrghyan hills, beyond which is the Kyzyl Irmak.

115 $\frac{3}{4}$ Spring called **Ak Punar** in middle of plain. Cemetery near the spring. Now turn SE. for several miles.

120 $\frac{1}{2}$ **Alaja**, small village to r. From Alaja the road climbs steadily in the direction of Sary Karaman Dagħ, crossing a tableland which extends across the plain. Many caves and rock-dwellings.

123 $\frac{1}{2}$ Pass **Bozgyr** village. Road descends gently to river valley.

126 $\frac{1}{4}$ Stone bridge over **Ekejik Su**, which flows N. in a narrow valley bounding the tableland on the E.

miles

- 28 Road passes beneath **Sary Karaman** village, on slopes of hill to l. Ak Serai reported 8 hrs. distant, Nev Shehir 9 hrs. The villages **Pirli** and **Dur Hassanly** are in view on the r. Road continues for several miles over undulating volcanic country rising towards a ridge in front, which connects the mountains on the S. with the lower hills on the N. Direction SE.
- 130½ Road from Dur Hassanly, ½ mile distant, joins on r.
- 133 Cross a stream flowing S. **Jejeli** village in valley to l.
- Road climbs to summit of ridge referred to under mile 128, and descends to
- 138½ **Tashderler** village (30 houses) in a ravine with steep walls of syenitic rock. A stream flows through the ravine to the N. Road ascends opposite side of ravine and enters bleak undulating country, which slopes down towards NE., crossing a series of gulleys and ravines at right angles. Tashderler lies under the last outlier of Sary Karaman Dag.
- 142½ **Chulla** village on a hill.
- 146 Summit of ridge. High cliffs of Tatlar In, across a gorge, visible in front. Descend, cross a stream, and ascend to
- 147½ **Tatlar In** village, 200 houses, among gardens. The stream flows in a deep gorge to the Kyzyl Irmak, near Tuz Köi. Leaving Tatlar In, road ascends to a plateau, over which a rough road has been made through fields of lava. After 3½ miles the country becomes smoother and the road descends into a plain of pumiceous tuff.
- 153½ **Alaja Shahr** village (35 houses) among trees, in a stream flowing to the Kyzyl Irmak at Achyk Serai.
- 156½ Fountain, filling 20 stone troughs, on the banks of a dry river bed running down from a gorge in high hills to r.

miles

157½

Descend over steep and well-cultivated slopes into the valley of Nev Shehir. Cross a torrent bed and two other low ridges and intervening gulleys, all converging towards the N.

160½

Reach **Nev Shehir**, built round the shoulder of a ridge at the confluence of two large valleys.

Cross stream by ford and enter level country, broken by many deep gulleys running N. to Kyzyl Irmak.

165½

Üch Hissar ½ mile to l. in a valley with a stream running NE. The road is now in the well-known district of the 'Hatted Rocks' formed by cones of soft tufa capped by blocks of basalt. The houses in the villages in this region are generally rock-cut dwellings with masonry facings. Road turns down the valley NE.

167

Matyan, 1 mile to l., near the confluence of above valley with another valley running N. and S. The road skirts the heads of the valleys in which these villages lie. Pass N. of high rock and village of **Orta Hissar**, a good landmark, 1½ miles from the road.

170

Ürgüb, small town, hewn in rocks.

173

Cross river valley and ascend to **Topuz Dag** pass, passing near **Ulash** village on l. Now accompany telegraph to Inje Su. Gentle descent over bare stony country, passing a village or two at some distance from road. About mile 176 cross a deep ravine and after about 2 miles enter valley of Inje Su, trending SE. Orchards and vineyards.

184

Inje Su, ½ mile W. of chaussée from Kaisari to Eregli, on a level plain. Hence by Route 63 to

202¼

Kaisari.

ROUTE 60

ANGORA—YAKSHY KHAN, 43 miles

This route is practicable for wheels. It has been measured by trocheameter as far as Kyatybyn Chiftlik, the remainder of the distances depend on time-reckoning.

miles

- 0 **Angora.** The road goes E. up the valley of the **Tabak-khane Su.**
- 6 Pass a cemetery.
- 6½ **Kayash Baghchesi.** Road follows the river valley to **Lala Khan** (17 miles), and crosses the watershed between Angora and the Kyzyl Irmak.
- 26 **Asy Yozgad**, a *mudirlik*, with a large khan.
Road crosses a ridge bearing 120° from the village, with a deep valley on the l. The valley turns eastwards, and the road descends into it, following a torrent bed for 1 mile, and then turning r.
- 31¾ **Karaja Hassan**, on the mountain slope, 3 miles to r. The road descends into the valley of a river, **Tabanly Su**, flowing NE. to the Kyzyl Irmak.
- 34 **Kyatybyn Chiftlik**, low in the valley.
Here the road to Bezir Khane (Route 61) turns to r. up the valley.
Present route goes downstream.
- 35½ Road turns up a *dere* to r., and crosses the high ridge separating the Tabanly Su valley from the Kyzyl Irmak. The road is not difficult for wheels.
The **Kyzyl Irmak** is reached below Yakshy Khan. The river-bed is sandy (100 yds. wide); it is forded in summer, and a ferry boat is used in winter.
- 43 **Yakshy Khan.**

An alternative track (unfit for wheels) leads directly from Asy Yozgad to **Kylyjlar** (6 miles), a mile and a half downstream from the point where the *araba* road turns out of the Tabanly valley. From Kylyjlar a bridle-path leads directly over the ridge to the Kyzyl Irmak.

ROUTE 61

YAKSHY KHAN—BEZIR KHANE, 53 $\frac{3}{4}$ miles

Road fit for wheels. Trocheameter measurements.

miles	
0	Yakshy Khan. Road coincides with Route 60 to Kyatybyn Chiftlik.
9	Kyatybyn Chiftlik. Road continues up Tabanly Su valley.
9 $\frac{1}{2}$	Assar Kõi, so called from a rocky eminence said to have traces of walls on top.
11 $\frac{1}{2}$	Khystynyn Chiftlik. General direction SW.
15	A tributary enters through a valley on the l. Tabanly valley, up to now a mile wide, now narrows to 500 yds. Presently a second tributary enters on l. Road is on SE. side of valley.
15 $\frac{3}{4}$	A third tributary enters on l.
16 $\frac{1}{2}$	Kuchaly, on the l. bank. A tributary enters.
17 $\frac{1}{4}$	A mill, with a stream entering on l.
17 $\frac{1}{2}$	Road crosses the Tabanly Su, from the r. bank to the l., enters a parallel valley, and proceeds at 230°.
18 $\frac{3}{4}$	A stream enters this valley on the r.
19 $\frac{1}{2}$	Road passes a yaila close to l. and another 1 mile to r., each of 3 or 4 houses.
	Road re-enters the main river valley, now very wide.
20 $\frac{1}{4}$	Road crosses a torrent bed, on l. side of main stream.
23	Cross a torrent bed : same remark as last.
24	Suleimanly, on l. bank of stream (wrongly placed on Kiepert's map), a Turkmen village. The direct bridle-path from Angora to Cheshnir Köprü crosses the present Route here (see Route 62). Forward bearing 225°.
28	Kerishli. (Chaushly Kõi reported 1 hour distant.)
30 $\frac{1}{4}$	Köseli. Road goes on in same direction, on high

miles

ground to N. of river valley, and crosses a stream, running S.

33 $\frac{1}{4}$ **Tol Kõi**, on the chaussée from Angora to Kaisari (Route 62).

35 $\frac{1}{4}$ Road crosses the Tabanly Su by a bridge, and ascends right bank, then turns off to cross rolling country, bearing 200°. A couple of miles further the road re-enters the river valley, and ascends it, bearing 260°.

39 $\frac{3}{4}$ **Haji Izzet Bey Chiftlik**, on r. bank. Natives state that the route followed from Tol Kõi is a detour, and that the direct road takes 1 $\frac{1}{2}$ hours.

41 Road crosses a dry river-bed by a bridge; it is still ascending the river valley.

42 $\frac{3}{4}$ Cemetery. Here the Aghaboz-Koch Hissar road crosses (see Route 59).

45 $\frac{1}{2}$ **Yörelî**. The Tabanly Su is said to rise E. of this village. Forward bearing 300°.

46 Road crosses a dry river-bed.

48 **Zivra**, on the S. slope of a ridge: Aghaboz is said to be 2 hours distant, over the ridge. Fountains. Forward bearing 225° all the way to Bezir Khane.

49 $\frac{1}{2}$ The road from Yörelî to Aghaboz crosses.

50 $\frac{3}{4}$ Top of ridge bounding Tabanly valley on W. Then over a rolling plateau for more than a mile, and down into the valley of Bezir Khane.

52 $\frac{1}{4}$ Cross the Suverek-Angora road (Route 5, mile 84 $\frac{3}{4}$) and, $\frac{1}{4}$ mile further on, an alternative loop of the same road.

53 $\frac{3}{4}$ **Bezir Khane**.

ROUTE 62

ANGORA—CHESHNIR KÖPRÜ, 60 miles

This section of the important Angora—Kyrshahir—Kaisari chaussée falls within the area described in this volume. The chaussée coincides with Route 5 from **Angora** to **Chatal** (20½ miles). Here it forks to the E., passes **Beinam** (24½ miles), and follows the course of a tributary into the valley of the **Tabanly Su**. It crosses the river near **Tol Köi** (35 miles), and then mounts the pass between Kartal Dag and Küre Dag, following the southern slopes of the latter to **Cheshnir Köprü** (about 60 miles).

A horse-path which saves some miles crosses **Elma Dag** directly from Angora to **Suleimanly** (Route 61, mile 24) and joins the chaussée near **Ali Bey Köi**, on the slopes of **Küre Dag**.

ROUTE 63

KAISARI—EREGLI, 110 miles

From Kaisari to Bor the road is metalled, though when reported upon in 1911 it was in complete disrepair. From Bor to Eregli it was said to be almost impassable after rain, but metal for repairs had been collected in many places. It is said to have been made fit for motor traffic to Nigde in 1916. Water is fairly scarce and not very good. Fuel is particularly scarce. There are no difficult gradients. Most of the information detailed below is from an officer's route report (November 1904).

An alternative and shorter route to Inje Su (see mile 18¼ below), which is often impassable in winter, passes between **Yilanly Dag** (see below) and **Erjies Dag**, and hugging the base of the latter mountain S. of the marshes joins the main road some 3 miles before Inje Su—total distance to Inje Su 15 miles (5 hrs.). Another authority affirms that the distance

to Inje Su by main road is at least 22 miles, not $18\frac{1}{4}$ as given below.

miles

- 0 **Kaisari**, alt. 3,730 ft. Leave centre of town.
- $\frac{1}{2}$ Reach outskirts of town. Road leads across a plain which appears circular and has a diameter of 6–7 miles. Route leads about 1 mile from the hills to l., and 6 miles from those to r. F. b. 286° .
 $\frac{1}{2}$ mile outside of Kaisari is a Government powder factory on both sides of the road.
- $1\frac{1}{4}$ Break in hills to l.; plain appears to extend through this break for 3 or 4 miles. Road hard, metalled, and in good order.
- $1\frac{3}{4}$ To l. high rocky spur approaches to within 800 yds.; to r. level plain.
- $3\frac{1}{4}$ To r., 700 yds. distant, low bare hill of irregular shape. To l. undulations rise to mountains 1 mile distant.
- $4\frac{3}{4}$ Plain on both sides again very flat.
- $5\frac{1}{2}$ **Ambar**, 20 houses, Turks, 100 yds. to l.
- $5\frac{3}{4}$ A marshy lake about 500 yds. wide begins on r. From the lake a stream goes under the road (which is 6 or 7 ft. above the level of the lake), and continues close beside the road to l.
- $6\frac{1}{2}$ Lake on r. ends. Cross the **Sarumsakly Su** by strong two-arched stone bridge; the river is 12 yds. wide, 5 ft. deep, and very muddy; current 6 miles per hour. Erjies Dagb bears 167° , Ali Dagb 122° . F. b. 249° .
 Road still good and suitable for all vehicles; many small villages round the plain on lower slopes of mountains.
- $6\frac{3}{4}$ Mountains which have been ahead all day are now close to r. Plain to l. is 5 miles wide.
- $7\frac{1}{2}$ Hills close to r., bare and rugged. The **Sarumsakly Su** is 100 yds. to l. Country very marshy on either side of stream.

miles

9

Cross **Boghaz Köprü**, good stone bridge of 7 arches over the **Kara Su**. The river is 20 yds. wide, $3\frac{1}{2}$ ft. deep, and has a moderate current; it flows from the marsh on l. through a narrow break in the hills to r. Good road to Angora goes off along l. bank.

F. b. 236° .

9 $\frac{3}{4}$

Hills on r. now only 50 ft. above road; they are rocky and quite bare.

10 $\frac{1}{2}$

Large marsh continues to l. F. b. 214° .

11

Road goes off half-right, winding over the hills, which vary from 50 to 200 ft. high.

11 $\frac{1}{2}$

Hills to r. have receded to 1,500 yds.

12 $\frac{1}{2}$

Cross roads.

12 $\frac{3}{4}$

To l. some low round hills 400 yds. distant on edge of marsh. River Sarumsakly Su in the marsh 1 mile to l.

13 $\frac{1}{4}$

Clump of trees 450 yds. to r.—first timber seen since leaving Kaisari.

14 $\frac{1}{4}$

Low flat ridge from r. comes close up to road. To l. Yilanly Dag intervenes between the road and the river, and apparently terminates the marsh.

14 $\frac{1}{2}$

Road slightly ascending. Country to r. now slopes up very gently for $1\frac{1}{2}$ miles to the foot of the hills.

15 $\frac{1}{2}$

Yilanly Dag now 1,000 yds. to l.

Road is sunken about 2 ft. in a sheet of lava for a stretch of about 2 miles.

16 $\frac{3}{4}$

Low rocky spur from r. comes down to road. Mountain on l., 1,300 yds. distant.

17 $\frac{1}{4}$

Begin ascent of rocky saddle which joins Yilanly Dag with the hills on r. of road.

17 $\frac{1}{2}$

Begin descent into valley. Injesu village lies below.

18 $\frac{1}{4}$

Reach **Inje Su**, large clean village, with fine ruined khan, mixed population of Greeks, Turks, and Armenians; alt. 3,920 ft. The village lies at mouth of a narrow valley full of large stones and boulders.

miles

Road and telegraph to Nev Shehir go W. up this valley.

From Inje Su to Develi Kara Hissar road runs across sandy plain nearly the whole way. No definite elevation is crossed. The metalled road is not used in dry weather. Carts prefer the sandy surface away from the road. Zengibar Kalesi (see below) is visible the whole way almost due S. The plain is covered with thistles.

F. b. 181° . Road nearly level; low rocky hillocks close on either side, restricting view.

- 21 Cross roads; the road to l. leads across marshy country to **Everek** (see *Handbook of Asia Minor*, Vol. IV, part 2, Route 39, mile 122).

No vegetation; road good and metalled.

- 23 $\frac{1}{4}$ Large salt lake, **Sultan Sazy**, begins 800 yds. to l. To r. are undulations, and beyond them, $1\frac{1}{4}$ miles from road, irregular high mountains.

F. b. 182° ; road rather stony.

- 26 $\frac{1}{2}$ F. b. 206° . To l. a well and police post. Lake to l. is about 4 miles wide. Beyond it rise the W. spurs of the Erjies Dag.

- 27 $\frac{3}{4}$ Mountains to E. of lake give way to broad marshy plains. To r. the mountains are 2 miles distant; they contain many valleys and ravines. Road still nearly level.

- 29 $\frac{1}{4}$ Long low ridge comes close to road on r.

- 33 $\frac{1}{2}$ Mountains on r. gradually closing in to road, which is quite level.

- 34 $\frac{1}{4}$ Develi Kara Hissar bears 195° ; gardens of town begin 1,200 yds. to l. Metalling of road much worn and mud very deep. Mountains to r. contain many sharp peaks and are distant about 1,000 yds. Cultivation on both sides of the road.

- 34 $\frac{3}{4}$ Walled fruit gardens and vineyards on either hand.

- 35 $\frac{1}{4}$ After crossing stream by wooden bridge reach

miles

Develi Kara Hissar, alt. 4,030 ft., 600 houses, Turks and Armenians; good shops. Water from stream which flows into the lake, the latter being still visible 5 miles to l. Wood very scarce; dung and thistles are used for fuel. The neighbourhood is malarious; village is built on crest and slopes of a spur from hills to N. It possesses a huge mass of gardens, orchards, and vineyards, appearing to extend almost to the lake. $\frac{1}{2}$ hr. to W. is **Zengibar Kalesi**, a striking mediaeval castle on lofty two-peaked hill.

F. b. 189°. After crossing spur on which stands the village, mountains are seen close to r., and marshy plain extending for about 6 miles to l.

36 $\frac{1}{2}$ Main road (described in *Handbook of Asia Minor*, Vol. IV, part 2, Route 31, miles 56 $\frac{1}{2}$ –68 $\frac{1}{2}$) makes a considerable détour to l., bearing 179°. Present route continues straight on by good horse road over the mountains, which close in more and more from r. Main road goes round the end of them.

37 Road becomes a mere path, in good order, but impassable for vehicles. Gentle ascent.

37 $\frac{1}{2}$ To r. a small village concealed in a small hollow near top of hills.

38 $\frac{1}{2}$ Gentle ascent continues; same forward bearing; no tree-growth.

38 $\frac{3}{4}$ F. b. 185°. Path begins to zigzag up the hill-side. Mountains now visible about 7 miles to l. beyond the lake in the plain. The lake is some 20 miles in length, and varies in size and depth with the season. In summer it is possible to cross it from Develi Kara Hissar to Senderamek, whence a road leads to Everek, skirting the S. foothills of the Erjies Dag.

40 Steep zigzag ascent. Hill-side very bare.

41 $\frac{1}{2}$ Alt. 4,900 ft. F. b. 189°. Continue along mountain-side; path more or less level; topmost ridge of the mountains is above on r.

miles

- 42 $\frac{1}{4}$ Begin fresh ascent ; path still in good order.
- 43 $\frac{1}{4}$ Reach summit, alt. 5,150 ft. F. b. 214°. Descent begins into bare valley 450 yds. wide and very rocky, with dry river-bed down centre. Path fair but muddy.
- 44 Pass **Arably**, 60 houses, Turks, at end of valley. F. b. 188°; path level. To l. are now some high irregular hills 800 yds. distant ; to r., 1,000 yds. from path, low rounded hills.
- 45 Join main road again. It comes from between two of the high hills to l. About here the road from Bozanty comes in from S.
- 45 $\frac{1}{4}$ Cross the **Bulduruch Su** by strong three-arched stone bridge. The stream comes from S., and is lost to view among the high hills SE. of Arably. F. b. 244° over bare plateau. Pass **Arably Khan** and zaptieh post near the bridge.
- 46 $\frac{1}{2}$ Low grassy hills on each side, 2,000 yds. to l. and 2,500 yds. to r.
- 49 $\frac{1}{4}$ Cross roads ; big undulation to l. ; village 1 $\frac{1}{2}$ miles to l. ; low hills 3,000 yds. to l. and 4,000 yds. to r.
- 52 $\frac{1}{2}$ Cross roads. A mound about 30 ft. high beside road on r. Beyond it, 3 miles distant, is **Miste** (or **Misli**) **Köi**, Greeks.
- 52 $\frac{3}{4}$ Well of bad water to r. First water since the **Bulduruch Su**. Alt. 4,840 ft. F. b. 232°. Hills to l. now 2,500 yds. distant, those to r. 5,000 yds. No tree or fuel of any sort in sight. Large herds of cattle graze on the plain.
- 55 Mountains on each side about 4 miles distant.
- 55 $\frac{1}{2}$ **Miste Khan** to l. of road.
- 58 Large village, **Zemzema**, 2 miles to l.
- 58 $\frac{1}{2}$ **Semandere**, 1 mile to l., 200 Greek and 100 Turkish families. Houses well built of stone ; a few poplar trees. Village is built at the mouth of a valley about 900 yds. wide, with small stream flowing from E.

miles

Bastana village is 4 miles distant in same direction, at foot of **Üch Kapu Dag** hills.

A track at right angles to main road leads to **Semander**, and bearing 238° from the village gradually converges to the main road again and rejoins it $3\frac{1}{4}$ miles from the village.

61 $\frac{1}{4}$ Road runs in a small valley between undulations.

61 $\frac{3}{4}$ F. b. 237° . A stream, **Nigde Su**, is 100 yds. to r., and accompanies road some distance to r.

62 $\frac{3}{4}$ **Ulaj** and **Kiklaj** villages $2\frac{1}{2}$ miles to l. at foot of hills.

Andaval Khan to l. End of plain. Road runs among low hillocks. F. b. 172° .

63 $\frac{1}{4}$ F. b. 180° . Road very good. Many gardens close to E.

64 F. b. 210° . To r. are low hills 700 yds. distant; close to l. are bare mountains, the **Görbekli Dag**, in which are numerous valleys. A road goes up one of these.

64 $\frac{1}{4}$ Heights beyond the gardens to r. form a long ridge, **Chichek Tepe**, running down to **Nigde**, which lies on a knoll on the end of the ridge.

64 $\frac{3}{4}$ Many villages and ravines in mountains to l., which are quite bare save for trees in the ravines.

65 $\frac{1}{4}$ F. b. 253° . Route 30 of Vol. IV, part 2, to **Takhta Köprü**, goes straight on.

66 $\frac{1}{4}$ Cross small stream coming from l.

67 $\frac{1}{4}$ Enter gardens of **Nigde**.

67 $\frac{3}{4}$ Arrive on l. bank of **Nigde Su**, which is between the road and the town. A road leads over good stone bridge into **Nigde**.

Continue round outskirts of town on S. side.

68 $\frac{1}{4}$ Cross the river by stone bridge and enter town. Pass through a few streets and then high-walled gardens on same general forward bearing.

69 $\frac{1}{4}$ Pass through a rock-cutting 40 yds. long and 18 ft.

miles

high, then enter more walled gardens; several villages, really suburbs of the town, are now on the lower slopes of mountains 1 mile to r. Soon pass hot spring.

70 A long spur from r. approaches close to road, which still passes through walled gardens. The walls are of mud and only about 4 ft. high.

71½ Emerge from gardens; F. b. 227°. To r. is undulating open country sloping gently up to the base of the mountains distant 2¼ miles. To l. is undulating plain stretching to mountains 4 miles away. Road excellent, gently ascending.

72½ Village surrounded by trees half-way across plain to l.; road now slightly descending but nearly flat; country on both sides quite barren.

73 Cross small but strong stream coming from r. and flowing into Nigde Su, which is 600 yds. to l., in a deep muddy bed.

73¼ F. b. 210°.

73½ Outlying gardens of Bor to l.

73¾ Small village among trees to r. on lower slope of mountains.

75 Enter **Bor** and 10 minutes later reach centre of town.

Road continues on same forward bearing through walled gardens close beside Nigde Su.

76¾ Road very soft, slightly descending.

77 F. b. 231°. The hills close to r. cease, and mountains are about 10 miles distant on either hand. Road emerges from gardens on to flat plain. Metalling ceases, and road becomes a soft unmade cart-track.

78½ **Kyzly Hissar**, large village, 3 miles to E., at foot of hills, with gardens extending N. and S.

80¼ Featureless level plain on both sides.

81 F. b. 236°.

82¼ Reach **Emen Chiftlik**, small Circassian hamlet;

miles	5 or 6 houses and a khan ; water from well ; alt. 3,800 ft.
	F. b. 179° over level plain. Track soft.
83½	F. b. 214°.
84	F. b. 224°.
86	Village of Bardak , 35 houses, 1 mile to l.
86¾	F. b. 229°.
88	Well of muddy water on r.
89¾	F. b. 228°.
90¾	A small mound beside road on r. ; at foot of mound is a police guard-house, a well (and ? Zenjili Khan).
91¾	Village of Yere (? Yeni Köi), 25 houses, Kurds 1¼ miles to r. ; no trees.
92	Low hill on l. about 3 miles long and 2 miles from road.
92¾	Village, 15 houses, Kurds, 1½ miles to r.
93½	Some large folds in the plain on both sides of route.
94¾	Cross roads.
95¼	Azizie Köi (Chaian Aziet), 100 houses, Circassians, 900 yds. to l. of road. A well of fair water to r. of road.
95½	F. b. 254°.
96¼	F. b. 214°.
97½	F. b. 240°. Chaiany Bagh , small village, 1¾ miles to l.
98	F. b. 247°.
99½	Road joins half-left, winding over plain, which is somewhat marshy.
100¾	Bulgurlu (Bulgurluk) village, 50 mud houses, Turkmens ; the village stands on a grassy ridge 500 yds. to l. The ridge is at right angles to the road and about 1 mile long, the nearest point to the road being 200 yds. distant. To r. is also a small grassy ridge close to the road. Well on roadside—water undrinkable even for animals.
101¼	A track goes off quarter-right.

miles	
102	Gentle ascent amongst low grassy hills.
102½	Descent to plain, which is flat to l., while low hills continue close to road on r.
104	Hills on r. cease, and disclose two villages on the plain, one being 1½, the other 3½ miles distant.
105¼	Bulgurlu station.
106	Village 3 miles to r.
106¼	Cross railway line, which then keeps close to road on r. between some bare, low hills.
106½	F. b. 229°.
107	Again cross railway line and begin descent towards Eregli , which now comes into view.
108	Cross narrow swift stream, Ivriz Su , coming from l., 2 ft. deep, by strong stone bridge, Hajilar Köprü .
108½	Cross similar but smaller stream by stone bridge.
109¼	Enter gardens of Eregli .
110	Reach Eregli .

ROUTE 64

EREGLI—SERAI ÖNÜ STATION *via* KARAPUNAR,
GENNE, AND SUVEREK

Total distance, 114¼ miles

This route, famous in history as part of the Syrian Road (leading from Syria through the Cilician Gates to the Aegean harbours), has been little used in modern times. Traffic now goes by the railway, or by the chaussée along the railway (Route 44). Even before the railway was laid down, the importance of Konia, and a superior water-supply, attracted traffic along the rather longer route by Karaman and Konia. The first section, however, Eregli-Karapunar, is still frequently used by travellers from Eregli to Konia.

In dry weather this road is practicable for wheeled traffic all the way. Water is obtained from fountains at Eregli.

Karapunar, Zengijek, Suverek, Serai Önü ; elsewhere from wells, often very deep. No trees or brushwood. Fodder and other supplies scarce ; sheep, however, are plentiful.

The general direction is NW. The road first crosses a level plain, fording a stream, then cross the Karaja Dagħ by an easy pass, reaching Karapunar. It then strikes over the plain, keeping NE. of the low Üzejik Dagħ, to Genne. Hence along the NE. flank of the Boz Dagħ, which it leaves at Suverek, to strike across a level plain to Serai Önü.

miles

0 **Eregli**, alt. 3,425 ft. (see p. 270). Leaving Eregli, the road goes NW. through rich meadow and cultivated land for 3 miles, when it enters the great Lycaonian Steppe. Winding to the l. of the direct line, it leaves Karga Köi $1\frac{1}{2}$ miles on the r.

8 Ford a tributary of the **Yedan Su**. The ground here is marshy.

$8\frac{3}{4}$ **Bektik**, alt. 3,297 ft., a village on both banks of the Yedan Su. Here it fords the stream, which flows W. to Ak Göl.

A good authority notes a built road striking off l. before reaching the first ford. It perhaps leads to a bridge over the Yedan Su.

$10\frac{3}{4}$ Road to Bor goes off r. Alt. 3,494 ft.

12 **Hairet Khan** to r.

The road rises steadily from this point to a pass over the SW. end of the **Karaja Dagħ**. This ridge, with its lofty serrated peaks running NE., towers on the r. : on the l., a lower ridge, the **Adsudus Dagħ**, runs N. and S.

$15\frac{1}{2}$ Well of brackish water.

$17\frac{1}{2}$ **Devrent** and small village to r., alt. 4,488 ft. About $3\frac{1}{2}$ miles farther on, road reaches the top of the pass, alt. 4,550 ft., and then descends into the valley between the Karaja Dagħ and the flat plateau N. of Karapunar. View of Karapunar Lake or Tuzlu Göl, a salt lake with a considerable extent of marsh on its borders.

miles

26½

A yaila of Karapunar, alt. 4,075 ft. Here the road Karapunar—Ak Serai (Route 54) strikes off NE. From this point there is a well-built road, passing between the Tuzlu Göl and two sharp cones, Dusul Dag and Karapunar Dag.

29½

Karapunar.

Road passes NE. of **Üzejik Dag.**

47½

Bajanak Yaila. Cross Route 42.

52

Genne, the ancient Kana, a Graeco-Roman city and Byzantine bishopric, to-day a miserable cluster of mud huts. The ancient importance of Genne is explained by the fact that it lay near the crossing of three major lines of communication. The roads from Karapunar and from Karaman (Route 58) met here, and the road from Konia to Aryssama (Route 42) passed a short distance to the S. To-day, Route 42 crosses Route 58 at a point about 4 miles S. of Genne, and it crosses the present route at Bajanak.

Close behind Genne, on the NW., is a peak of no great height which should be noted as a landmark. It is visible from many parts of the great plain to the N., and E., and S. This peak may be taken as the culminating point of the Boz Dag at its south-eastern end, but the Boz Dag stretches some distance from the S. as a marked rise in the plain.

From Genne to Suverek the road keeps close to the NE. flank of the Boz Dag. This region is studded with summer yailas, with a few permanent villages. In connexion with this part of the route, reference should be made to the description of the Boz Dag, p. 16, and the passes over it should be noted (p. 49).

Leaving Genne, the road skirts the eastern foothills of the Boz Dag, which push it out NE. of the air-line.

miles

56 $\frac{1}{4}$

Alsakly, a small village. A mile beyond Alsakly, extensive ruins of an ancient village are reached, and from this point there is a choice of two roads. The direct road goes straight across the plain, NNE. to the point of reunion, 5 $\frac{1}{2}$ miles farther on. A second road strikes l. and passes Ennek (1 $\frac{1}{2}$ miles) and Yaly Bayat (3 $\frac{1}{2}$ miles). The wells at Yaly Bayat are much nearer the surface than those out in the plain. The village lies in a valley facing N. which runs back into the Boz Dagħ. From Yaly Bayat a road leads to the above-mentioned point of reunion (4 miles). Another road from Yaly Bayat joins the direct road still farther N. After passing Haji Vahab Yaila (6 $\frac{1}{4}$ miles), Haji Omar Yaila (8 miles), and crossing the main road Konia Ak Serai (9 $\frac{1}{2}$ miles), it joins the direct route about the 11th mile.

64 $\frac{3}{4}$

Cross a Konia—Obruk road.

66 $\frac{1}{4}$

Cross a subsidiary Konia—Obruk road. **Toprakly Yaila**. 1 mile to r.

67 $\frac{1}{4}$

Cross the main Konia—Obruk road (Route 43).

68 $\frac{3}{4}$

Köpekler, yaila of Obruk. A third road, Obruk to Konia, passes this way. Those four roads to Konia cross a pass over the Boz Dagħ. Obruk, according to native reckoning, is 2 hours away; Konia 10 hours. Köpekler lies in a bay of the Boz Dagħ; deeper in the bay, SW. of Köpekler, lie two more yailas of Obruk, Katranjy Yaila and Ali Bey Yaila.

From Köpekler two roads lead to Akja Shahr, where they join before proceeding to Suverek. The first, A, strikes over the plain; the second, B, hugs the flank of the Boz Dagħ, passing through several yailas and the village of Zengijek.

A

Leaving Köpekler the road goes W. of N.

70

Burun Kuyu Yaila, near the end of the gentle ridge

miles

separating the bay in which Köpekler lies from another bay to the NW. Route continues in the same direction, over the level plain.

72 **Kara Dushen Yaila.** Direction now slightly E. of N.

73½ Join the road Obruk-Akja Shahr. Road turns to l. and proceeds NW.

75 The road from Eshme Kaya comes in on the r.

76½ Part of **Boruk Kuyu Yaila.**

77 Part of **Boruk Kuyu Yaila.**

78 Cross the road from Ak Ören to the Mernek Pass.

82 **Akja Shahr**, village, close to the foot of the northern extension of the Boz Dagħ. Close above Akja Shahr, on the SW., there is a steep hill with a Byzantine fortress on top, **Akja Shahr Kale**, built roughly of boulders and mud.

B

Leaving Köpekler and proceeding NW. this road crosses a gentle ridge, and enters the valley in which lies **Geimir Yaila** (2 m.). The yaila consists of a few mud houses with a well of abominable water, the worst in all this region. This is the site of the ancient Perta; it is a wilderness of ruins, with a mound about 30 ft. high. On the mound there is a rude enclosure, with a circular wall, built roughly of small stones and mortar, about 100 ft. in diameter.

Passing an ancient cemetery $\frac{3}{4}$ mile farther on, the route crosses another low ridge and reaches **Haji Noiman Yaila** ($4\frac{1}{2}$ miles). At the fifth mile is **Asma Kõi**, a few houses in the plain opposite a recess in the Boz Dagħ. Thence a little N. of W. to **Kochash** ($6\frac{3}{4}$ miles). Kochash, a small village, lies near the eastern entrance of the Mernek Pass over the Boz Dagħ; the western entrance leads due S. from Zengijek (see below), and is the easier road. From Kochash over the plain NW., passing two small hills l. to **Zengijek** ($11\frac{1}{2}$ miles),

miles

a village pleasantly situated in the corner between the Boz Dagħ proper and its northward extension. It enjoys an excellent water-supply coming from a spring rising near Zengijek Kale in the hill to the W. There are two small isolated hills (mentioned above) in the plain in front of the village, each about 1 mile away, and bearing 145° and 155° respectively. A road goes S. by Mernek and Egribayat to Konia (Route 4); the only cart-road to the W. goes by Suverek.

A bridle-path crosses a pass over the ridge behind the village (bearing from the village 290°) and goes to Sarnych. 20 mins. walk from Zengijek along this path, on the top of the ridge, and facing W., stands **Zengijek Kale**, the acropolis of a Byzantine city, probably Verinopolis, whose ruins extend to the E. and S. The walls of the acropolis (no measurements available, but size not considerable), are 6 ft. thick, built strongly of stone and mortar. On the E., W., and SW. the living rock takes the place of the walls. This kale was an important strategical point in Byzantine times, commanding a pass by which the Syrian Road, or the road along the W. side of the hills, could be turned. The kale commands an extensive view in a clear atmosphere over the plain to the N. and W., right up to the railway stations of Meidan and Serai Önü. The road Konia-Suverek is dead ground. A good spring is tapped on the hillside E. of the kale, immediately below the ruins, and water was observed in a well in the ruins in July 1912. Akja Shahr Kale (see above) is about $1\frac{1}{2}$ miles to NE.

From Zengijek village the road goes E. of N. to **Akja Shahr** village (14 miles).

From Akja Shahr the road crosses a low pass over the northern extension of the Boz Dagħ, going NW.

Suverek, a biggish village, with several good foun-

miles

tains. Fodder can be got here, and the first trees since Karapunar are seen. The village is built round a mound, marking an ancient site. This place was important in ancient times as the point where the Syrian Road, meeting another great trade route from Ak Serai (Routes 43, 57) crossed the road from Konia to Angora.

Route now follows the road to Konia, leaving Ölmez to l. after $4\frac{1}{2}$ miles.

Hence it proceeds due W. for 1 mile and then slightly S. of W.

95 $\frac{1}{4}$ Cross a road going from Dedeler (?) to Konia.

98 **Jamili**, village, also called **Kale**, with at least 2 wells. Direction now about due W.

100 Cross the road from Karabagh to Konia.

101 **Chaldere** village. Meidan station bears 240° , $3\frac{1}{2}$ miles distant. Route proceeds in the same direction.

108 Cross the railway near the stone marking km. 377. The road recrosses the railway before reaching Serai Önü.

114 $\frac{1}{4}$ **Serai Önü** village. The station is about 1 mile S. of the centre of the village. Serai Önü is a prosperous and growing village, surrounded by a number of new settlements of refugees. Its importance is bound to increase, owing to the growing traffic between the railway and the large district to the NE. The climate is good, and there is an excellent supply of spring water. A small stream flows through the village, going NW. Beside the station there is a khan and large buildings for storing corn.

There is an alternative route Suverek—Serai Önü, via **Dedeler**. Leaving Suverek the road goes over the plain to **Dedeler** (11 miles) on an average bearing of 279° . From Dedeler, Zengijek Kale (visible) bears 121° , the pass on Route 3 bears 188° . Hence the

miles

road winds westwards among bare downs for 3 hours, and turns S. for 15 minutes near a series of wells. It then turns W. again and reaches Serai Önü in 1 hour 10 minutes. Total distance about $28\frac{1}{2}$ miles. The times from Dedeler to Serai Önü are those of a traveller on horseback. The natives gave the distance as 5 hours.

GAZETTEER OF TOWNS

AFIUM KARA HISSAR, alt. about 3,350 ft. ; headquarters of the independent sanjak of Kara Hissar Sahib. P. and T. Junction of the Anatolian and Smyrna-Kassaba railways ; pop. about 33,000, including 27,000 Moslems (said to be fanatical), the rest mainly Armenians.

General description.—Above the town rises a bare almost perpendicular rock about 650 ft. high, which was the Byzantine fortress of Akroenos. The summit is reached by a rock stairway. The houses are chiefly low flat-roofed clay structures built close together to N., E., and S. of the rock and up a small valley which comes down from the hills behind. The plain is marshy in spring and largely cultivated. Several isolated crags rise out of it.

Supplies and commerce.—The water is good, and the bazar is one of the best in Anatolia. There is a large trade in opium, cereals, wool, yellow berries, bees' wax, carpets, inlaid wood-work, &c.

Communications.—For the communications of Afium Kara Hissar with the north, west, and south, see Vol. II. Routes described in this Volume connect it with :

1. Chifut Kassaba (see Route 33).
2. Konia (see Route 21).
3. Sivri Hissar and Angora (see Routes 16A, 13, 10, 10 A).
4. Eski Shehir (see Routes 16, 12).

AK SERAI (anc. Garsaura, Archelais, Colonia). Chief place in the kaza of Ak Serai in the sanjak of Nigde in the vilayet of Konia ; P. and T. ; population Turkish, with a considerable number of Armenians. In the Seljuk period it was a place of some importance, lying on a much frequented road (Routes 43, 56) from Konia to the east.

General description.—Ak Serai lies on the eastern edge of

the lowest part of the Lycaonian depression, close under the hills that border the plain, and not far from the northern foot of Hassan Dagħ. It is watered by streams coming from Hassan Dagħ and the hills to the east, and lies among luxuriant gardens. The locality is unhealthy. There is a poor bazar.

Communications.—Routes described in this Volume connect Ak Serai with :

1. Kaisari (see Route 56).
2. Eregli (see Route 55).
3. Karapunar (see Routes 53, 54).
4. Konia (see Route 43).
5. Koch Hissar (see Routes 50 and 52).
6. Parlissan (see Route 51).

AK SHEHIR (anc. Philomelium), alt. 3,265 ft., headquarters of a kaza in the merkez sanjak of Konia ; P. and T. ; station on the Anatolian Railway ; pop. given in 1914 as 15,000, composed of 10,000 Turks, 4,800 Armenians and 200 Greeks.

General description.—The town lies among fine gardens on the slopes of Sultan Dagħ above the Ak Shehir Göl. The streets are narrow and dirty and many of the houses ruinous. Some distance E. of the town is the tomb of Nasreddin Khoja, a place of pilgrimage for Moslems. There are several khans and inns, all indifferent.

Supplies and commerce.—There is plenty of water from springs. The bazar is fair. Carpet-making and leather-working are the chief local industries and there is some fishing on the lake. Exports consist chiefly in wool, cereals, opium, fish, fruit, butter, eggs, cheese, carpets, silk cocoons, &c.

Communications.—The town lies on the Anatolian Railway (see Route II). Roads or tracks described in this volume connect it with

1. Afium Kara Hissar (see Route 21).
2. Sivri Hissar (see Route 10).
3. Konia (see Route 21).
4. Yalovach (see Routes 26, 27).

ANGORA (anc. Ancyra ; Tk. Engüri), alt. 3,100 ft., capital of the vilayet of Angora ; P. and T. ; terminus of a branch from the Anatolian Railway at Eski Shehir and starting point of a narrow-gauge line to Asy Yozgad ; pop. given in 1914 as about 35,000, composed of 20,000 Turks, 8,000 Catholic Armenians, 2,500 Protestant Armenians, 3,500 Greeks, and 800 Jews.

General description.—The town lies on the E., S., and W. slopes of a hill, the top of which, about 400 ft. above the surrounding plain, is crowned by a fortress partly in ruins. The hill falls on the N. in a precipice at the foot of which flows the Engüri Su. The houses are mostly two-storied, built mainly of sun-dried bricks with tiled roofs, and are built in irregular terraces from the plain to the top of the hill, to some extent encroaching on the fortress enclosure. The streets are narrow, winding, and dirty. On the outskirts are two barracks, one for infantry, the other for cavalry. The railway station lies about $\frac{3}{4}$ mile W. of the town in the plain. There is a hotel restaurant (dirty) at the station and several khans.

Supplies and commerce.—There is abundance of drinking water brought from the Elma Su about 12 miles distant. The position of the town gives it considerable commercial importance. It is celebrated for honey and fruit. Exports consist mainly in goat-skins, mohair, wool, opium, wax, wheat, barley, yellow berries, gum tragacanth, flax, sheep, cattle, and wine. The imports are chiefly manufactured articles.

Hygiene.—The town is said to be unhealthy in summer, when the wealthy inhabitants move to their country houses.

Communications.—There is rail communication with Eski Shehir and Asy Yozgad (see Route I). Roads or tracks described in this volume connect the town with

1. Kaisari (see Route 59).
2. Konia (see Routes 5, 6, 1).
3. Sivri Hissar (see Routes 10, 10 N).

Other important roads lead to Constantinople, Kastamuni, Changry, and Sivas.

AZIZIE (official name Buzluja Jirgin), head-quarters of a kaza in the independent sanjak of Kara Hissar Sahib ; P. and T. ; pop. given in 1914 as 5,477.

General description.—The town is situated on the lower slopes of an isolated hill at the head of a fertile valley sloping to the Sakaria. There is at least one good khan.

Supplies and commerce.—The kaza is essentially an agricultural area and produces large quantities of excellent cereals. Opium, cotton, and fruit are also grown. The chief exports are the commodities already mentioned and mohair, wool, honey, and wax.

Communications.—Routes described in this volume connect Azizie with

1. Chai (see Route 11).
2. Eski Shehir (see Route 11).
3. Sivri Hissar (see Route 13).
4. Ak Shehir (see Routes 11 D, 10):

BEY SHEHIR, head-quarters of the kaza of the same name in the merkez-sanjak of Konia ; P. and T. ; pop. mainly Turkish.

General description.—The town is formed by two villages on either side of the Bey Shehir River where it issues from Bey Shehir Lake. It contains some 700 houses and a barracks. Unhealthy climate.

Supplies and commerce.—Cereals and fruit.

Communications.—Routes described in this Volume connect Bey Shehir with :

1. Konia (see Routes 34 and 35).
2. Karaghach (see Route 29).
3. Dineir (see Route 25).
4. Chumra station (see Route 39).

For connexions with the south, see Vol. III, part 3.

BOLAVADYN (anc. Polybotus), head-quarters of the kaza of the same name in the independent sanjak of Kara Hissar Sahib ; P. and T. ; pop. given in 1914 as 10,000, all Turks, who are said to be very fanatical.

General description.—The town lies in the valley of the

Akar Chai on the chaussée from Chai to Azizie. There are several fair khans. The konak has telephonic connexion with Chai station. The neighbourhood of the town is marshy.

Supplies and commerce.—There is some trade in cattle, wool, cereals, mohair, and opium. Mats and pottery are manufactured.

Communications.—Routes described in this volume connect the town with

1. Afium Kara Hissar (see Route 16 A).
2. Azizie (see Route 11).
3. Ak Shehir (see Route 21).

An unimportant road (fit for wheels) runs to Piribeyli.

CHAI (near the anc. Julia-Ipsus), head-quarters of a nahie in the Bolavadyn kaza of the independent sanjak of Kara Hissar Sahib; station on the Anatolian Railway; pop. given in 1914 as 7,500.

General description.—The town lies close to the foot of Sultan Dag, among trees and gardens. Its importance is derived from its position near the junction of the road from the Maeander valley via Dineir and the Constantinople-Konia road. There is a khan and a small bazar.

Supplies and commerce.—There is abundance of water. The vine is extensively cultivated in the district and there is some trade in cereals, wool, and opium.

Communications.—Routes described in this volume connect Chai with

1. Afium Kara Hissar (see Route 21).
2. Eski Shehir (see Route 11).
3. Sivri Hissar (see Routes 11, 13).
4. Konia (see Route 21).
5. Dineir (see Route 31).

EGERDIR, P. and T.; the place is the headquarters of the kaza of the same name in the Hamid Abad sanjak of the vilayet of Konia.

General description.—The town is situated partly at the foot of the Davras Dag, partly on a spit that projects into the Egerdir lake. It is the present terminus of the Ottoman

railway. A single line of rails runs to the end of the spit, and a wooden pier has been constructed alongside for the lake traffic.

Communications.—The principal communications are with the south (see Vol. III, part 3) and by rail with the west (see Route IV). Roads described in this Volume connect it with

1. Dineir (see Route 25).
2. Bey Shehir (see Route 25).
3. Yalovach (see Route 30).

EREGLI, P. and T.; station on the Baghdad Railway; pop. 8,500—7,200 Turks, Circassians, and Tatars, 750 Armenians, and 550 Greeks. The town is the head-quarters of the kaza of the same name in the merkez sanjak and vilayet of Konia. It has offices of the Régie and Public Debt.

General description.—The place lies on the edge of the Konia plain at an altitude of about 3,460 ft. It is surrounded by orchards and gardens. It possesses 3 banks, 5 insurance offices, 2 khans, and a small German hotel. There are 20 mosques, 1 Armenian church, and 1 Greek church.

Supplies and commerce.—The town has recently risen in importance owing to its position on the Baghdad Railway. The bazar is large and much frequented. Fruit is plentiful in season. Exports include cereals, chick-peas, carpets, wool, and gum tragacanth. The chief imports are coffee, sugar, petroleum, and iron goods. There is an active trade with the interior.

Hygiene.—The district is unhealthy, owing to the neighbouring swamps.

Communications.—Eregli is a station on the Baghdad line (see Route III). Roads described in this volume connect it with

1. Konia (see Route 44).
2. Karapunar (see Route 64).
3. Ak Serai (see Route 55).
4. Kaisari (see Route 63).

There is telegraph connexion with Karaman, Karapunar, Nigde and Bozanty, via Ulu Kyshla.

ESKI SHEHIR (anc. Dorylaion), head-quarters of a kaza in the Kutahia sanjak of the vilayet of Khodavendighiar ; military dépôt ; P. and T. ; junction on the Anatolian railway ; pop. given in 1914 as 34,600, made up of 29,000 Moslems, 3,000 Armenians, 2,500 Greeks, and 100 Jews.

General description.—The greater part of the town lies on the S. bank of the Porsuk Chai. On this side the Greek and Armenian quarters, with a covered-in bazar and a Turkish bath, lie in the plain, while the Turkish quarter extends up the hill on the S. On the left (N.) bank houses are springing up in the direction of the railway station. The ruins of the ancient Dorylaion are situated round an isolated hillock NE. of the modern town.

The Porsuk Chai at Eski Shehir is 25–30 ft. wide, flowing in a fairly deep muddy bed. It provides the power for several mills and factories. It is well stocked with fish, which, however, are not good eating.

Supplies and commerce.—Imports are chiefly raw materials, iron goods, glass-ware, petrol, &c. Exports consist in meerschau (from the Daghardy mines), cereals, straw, wool, raw hides, opium, mohair, furs, eggs, &c.

Communications.—Eski Shehir has always been important as a road centre, commanding as it does the great routes from the NW., E., and SW. In the present volume routes connect it with

1. Sivri Hissar (see Route 14).
2. Chai (see Route 11).
3. Afium Kara Hissar (see Routes 12, 16).

ILGHIN (anc. Tyriaeum), head-quarters of a kaza under Konia ; P. and T. ; station on the Anatolian Railway.

General description.—The town lies in a fertile valley at the foot of the eastern prolongation of Sultan Dag. There is a fine mosque and one of the largest khans in Turkey. At the W. end of the town is a barracks and a little farther W. some hot springs, roofed in.

Supplies and commerce.—The bazar is poor. The chief local crop is wheat.

Hygiene.—The place is malarious owing to the proximity of the Chaushjy Lake (see p. 166).

Communications.—Ilghin is connected with Afium Kara Hissar and Konia by the Anatolian Railway (see Route II). Roads described in this volume connect it with

1. Afium Kara Hissar (see Route 21).
2. Kolu Kissa and the Haimane (see Routes 10c, 8, etc.).
3. Konia (chaussée and horse track ; see Routes 21 and 24).

ISPARTA, P. and T. ; pop. over 20,000. There is a considerable floating population during six months of the year, composed mainly of Greek traders. The town is the administrative centre of the sanjak of Hamid Abad in the vilayet of Konia.

General description.—The place is beautifully situated in a fertile plain at the foot of the Aglasun Dag and on the banks of a tributary of the Ak Su. Nearly every house has a garden, and round the town are fine plantations. The streets are narrow and not very well kept.

Outside the town is a large mosque with a dome which was formerly gilt, and there are about thirty other mosques.

In 1914 it was reported that the town had been badly damaged by an earthquake.

Supplies and commerce.—The sanjak of Hamid Abad produces wheat of excellent quality. Opium is successfully cultivated, and there is a considerable trade in grapes and wine.

Communications.—Routes described in this Volume connect Isparta with Dineir, Egerdir, and Bey Shehir (see Route 25). Its communications with the south are described in Vol. III, part 3. It lies near Route IV.

KAISARI, alt. 3,500 ft. ; head of an independent sanjak ; P. and T. ; population about 65,000, of whom 38,500 are Turks, and 21,500 Armenians and Greeks.

General description.—The town stands on a broad plain to NE. of the Erjies Dag. It contains many well-built houses, but the streets are narrow and imperfectly paved. The

konak, post-office, barracks, and other public buildings are in the central part of the town, which is surrounded by ancient walls and a dry moat. There are 150 mosques and mesjids, 31 *zavies* and *tekes*, 8 churches, and numerous schools and orphanages. Talas, about 4 miles E. of Kaisari, is the head-quarters of American missions in Cappadocia. On the outskirts of the town is a public hospital, built in 1890. There are 120 ovens, 30 khans, 11 public baths, and 123 fountains.

The Turks of Kaisari are said to be among the proudest and most conservative of the Ottoman Empire.

The town is commanded by hills about 1 mile off to S. and W. The lower slopes of these hills are covered with villages and vineyards. The town offers little opportunities for defence.

Commerce.—Though the trade of Kaisari has decreased, it is still one of the most important trade centres of E. Asia Minor. There are important saltpetre works W. of the city; *pasdirma* (pemmican) of superior quality is made, and cotton and wool tissues, carpets, hides, yellow berries, almonds, and dried fruit are exported; but the distributing trade is the principal occupation of the people. Much wine is made, the volcanic soil and the climate being admirably adapted for vine culture. Pears and apricots are extensively grown on the slopes of the Erjies Dag.

Supplies.—The bazars are numerous and well supplied. Fuel appears to be scarce. Charcoal, cow dung, and dry reeds are generally burnt.

Climate.—The climate is dry and apparently healthy. Sudden changes of temperature are frequent. The thermometer has been known to fall from 70° to 14° in the space of 5 days. In summer the temperature rarely exceeds 91°. From January 15 to February 1, 1887, the mean maximum was 32° and the mean minimum 14°, though on one occasion a temperature of -5° was recorded.

During the hot season all but the very poor remove to the foot-hills of the Erjies Dag, and whole quarters of the town remain empty.

Communications.

I. *Roads* radiate from Kaisari in every direction, the most important being W. to Kyrshahir, NW. to Yozgad and Angora, NE. to Sivas and to Azizie (see Vol. IV, part 1), and E. to Malatia (see Vol. IV, part 2).

The routes described in the present volume are :

1. Chaussée to Eregli (see Route 63).
2. Cart-track to Ak Serai (see Route 56).
3. Cart-track to Angora (see Route 59).

II. *Telegraph* to Yozgad, Sivas, Azizie, Albistan, Ak Serai, Nigde, &c.

KARAPUNAR (official name Sultanie), head-quarters of a kaza under Konia ; P. and T. The population, numbering 3,000–4,000, occupy the town from October to April and live for the rest of the year in yailas.

General description.—The place lies in the plain under the SE. corner of Karaja Dag and extends up the N. slope of an isolated hill. NE. of the town lies a marshy lake. The district is volcanic and of great geological interest.

Supplies and commerce.—The chief local products are cereals, butter, wool, and mohair. Large herds of sheep, Angora goats, and camels are raised.

Hygiene.—The neighbouring marsh is a breeding ground for the mosquito.

Communications.—Routes described in this volume connect Karapunar with

1. Konia (see Route 45).
2. Seraï Önü (see Route 64).
3. Sultan Khan (see Route 53).
4. Ak Seraï (see Route 53).
5. Eregli (see Route 64).
6. Karaman (see Route 58).

KARAGHACH (anc. Neapolis), head-quarters of a kaza in the Isparta sanjak of the vilayet of Konia ; P. and T.

General description.—The place is built of mud huts, surrounded by gardens, in the plain near the Bey Shehir lake.

Supplies and commerce.—There is a good water-supply

brought by conduit from the hills. No details are available regarding other supplies.

Communications.—Routes described in this volume connect Karaghach with

1. Yalovach and Dineir (see Route 22).
2. Ak Shehir (see Routes 22, 26).
3. Ilghin (see Routes 28, 10 A).
4. Konia (see Route 22).
5. Bey Shehir (see Route 29).

KARAMAN, P. and T.; pop. 5,000—4,500 Turks and 500 Greeks. The town is the centre of the kaza of the same name in the merkez-sanjak and vilayet of Konia. The headquarters of the Régie for a large district is fixed here.

General description.—The town lies on the edge of the Lycaonian plain, and occupies the site of the ancient Laranda, of which nothing now remains except the name, still used by the Christian population. There are considerable mediaeval ruins, notably those of a castle to W., 2 fine mosques—1 at the S. and the other at the W. end of the town—and a beautiful *medresse* S. of the main street and just W. of the bazar. There are 2 khans, of which that situated opposite the konak is said to be the better.

Supplies and commerce.—A good deal of agriculture and cattle-breeding is carried on, and the bazar is said to be good. The only local manufactures are coarse cotton and woollen goods. Hides, wool, and yalonia are sent to the Smyrna district. Experiments have been made recently in the production of sugar-beet round Sidrova to NE. of Karaman.

Hygiene.—The place is said to be subject to fever.

Communications.—Karaman is a station on the Baghdad Railway (see Route III). Roads described in this volume connect it with

1. Konia (see Routes 44, 46).
2. Karapunar (see Route 58).
3. Eregli (see Route 44).
4. Siristat (see Route 40).

There is telegraph connexion with Konia, Mut, and Eregli.

KOCH HISSAR, head-quarters of a kaza in the merkez-sanjak of Konia ; P. and T.

General description.—The village consists of about 300 houses lying among orchards and vineyards at the mouth of a ravine about 200 ft. above the plain and 2 hrs. from the great salt marsh (anc. Tatta Palus) in the centre of the Anatolian plateau.

Communications.—Routes described in this volume connect Koch Hissar with

1. Angora (see Routes 48, 59).
2. Kaisari (see Routes 49, 59).
3. Ak Serai (see Routes 50, 52).

KONIA (anc. Iconium), alt. 3,438 ft., capital of the vilayet of the same name ; P. and T. ; railway station ; pop. given in 1914 as 50,000, composed of 44,000 Turks, 3,000 Armenians, 2,800 Greeks, and 200 foreigners.

General description.—Konia covers an extensive area in the shape of an oblong running N. and S. In the centre of the town is a low but conspicuous hill formerly occupied by the palace of the Seljuk sultans. The modern city has spread considerably beyond the Seljuk walls. The latter had a circumference of between 2 and 3 miles and are now ruinous. On the newer side of the town, towards the station, are a number of good houses. There are several mosques and tekkes. Special mention should be made of the tekke of the Mevlevi dervishes and the türbe which contains the tomb of the founder of the order. Konia is still the head-quarters of the Chelebi Effendi, head of the order.

From the town to the station, which lies to W., runs a fine avenue, along which are the public gardens. The head office of the German irrigation company is near the station. There is a good European hotel at the station and a number of khans and inns in the town.

Konia has a sentimental interest for the Turks as having been the capital of the Seljuk dynasty.

Supplies and commerce.—There is an abundance of good water. The city is the centre of a large agricultural district and there

is a considerable trade in cereals, wool, yellow berries, linseed, and hides. Carpets of good quality are made and there is a saltpetre factory.

Communications.—Konia is the terminus of the Anatolian Railway and the starting-point of the Baghdad line. Routes described in this volume connect Konia with

1. Afium Kara Hissar (see Route 21).
2. Ak Serai (see Route 43).
3. Karapunar (see Route 45).
4. Karaman (see Routes 44, 46).
5. Eregli (see Route 44).
6. Siristat (see Routes 37, 40).
7. Bey Shehir (see Routes 34, 35).
8. Dineir (see Route 22).

NEV SHEHIR, alt. 3,800 ft., head-quarters of a kaza in the independent sanjak of Nigde ; P. and T. ; pop. given in 1914 as 23,500, composed of 13,000 Turks, 9,000 Greeks, and 1,500 Armenians. Most of the Armenians were deported and massacred during the war.

General description.—The town lies round the N. end and up the E. flank of a ridge which forms the W. side of a shallow steep-sided valley. At the S. end of the town is an isolated hill on which is an ancient fortress. A stream runs N. past the town, down a narrow valley to the Kyzyl Irmak. Through a gap in the ridge on the E. side of the valley runs the road to Kaisari. There is a military dépôt on the northern outskirts of the town.

Supplies and commerce.—Nev Shehir is a centre of the carpet industry. Coarse white cloth for the native market is also manufactured. Cereals, vegetables, raisins, wax, hides, gum tragacanth, opium, wine, pasdirma, wool, mohair, and silk cocoons are exported.

Communications.—Routes described in this volume connect Nev Shehir with

1. Konia (see Routes 56, 43).
2. Angora (see Route 59).
3. Kaisari (see Route 59).

NIGDE, alt. about 3,800 ft.; P. and T.; pop. 11,500, of whom 7,600 are Turks, 2,700 Greeks, and the remainder Armenians, with a few Protestants. Nigde is head of an independent sanjak and comprises three *mahallas*—Nigde, Kayabashy, and Tepe Viran.

General description.—The town straggles around a flat spur, Chickek Tepe, projecting SE. from the Hassan Dagh mountains. The spur rises about 200 ft. above the Nigde Su, which runs through the town and provides an abundant supply of water. Water is also brought from the mountains. The valley running from Eregli to Develi Kara Hissar narrows here, and the high ground of Nigde may be said to command the valley. In the town is a large castle of massive construction which would be a difficult place to take without the aid of guns. There is a barracks for one battalion of soldiers on an eminence commanding the town. The houses of the town are well built of stone, the streets are narrow and irregular, steep, and badly paved. Numerous and extensive gardens and vineyards, most of them walled, surround the town and extend for a number of miles along the Nigde Su.

The town is well provided with shops, bakeries, and mills; there are 2 hotels and at least 11 khans.

There are 5 mosques and 16 minor places of worship, 2 Greek and 1 Armenian churches, and a Protestant chapel. There are also 46 Turkish schools, 2 Greek, 1 Armenian, and 1 Protestant.

Commerce.—The town does a fair trade in cereals, raisins and dried fruits, wine, hides, wool, carpets, &c.

Communications.—Routes described in this volume connect Nigde with

1. Eregli (see Route 63).
2. Kaisari (see Route 63).

There is telegraphic communication with Eregli, Tarsus, and Kaisari.

SIRISTAT, head-quarters of the kaza of Bozkyr in the merkez-sanjak of Konia; P. and T.; pop. mainly Turkish, with a few Greeks.

General description.—The town lies in the fertile valley of the Siristat Chai which falls into the Charshembe gorge.

Supplies and commerce.—A good deal of cereals is grown locally. There is considerable fruit cultivation, largely vine.

Communications.—Routes described in this volume connect Siristat with

1. Bey Shehir (see Route 39).
2. Konia (see Routes 40, 37).
3. Karaman (see Routes 40, 44).

There is also communication, by pack-route, with the south (see Vol. III, Part 3, of this handbook).

SIVRI HISSAR, head-quarters of the kaza of the same name in the merkez-sanjak of Angora; P. and T.; pop. given in 1914 as 20,000, composed of 15,500 Turks and 4,500 Armenians.

General description.—The town lies high up the slopes of Sultan Dagħ and is visible from a long distance from S. and W. The situation is healthy.

Supplies and commerce.—The chief exports are cereals, straw, hides, opium, wool, mohair, and carpets.

Communications.—Routes described in this volume connect Sivri Hissar with

1. Eski Shehir (see Route 14).
2. Beylik Köprü station (see Route 10).
3. Bicher station (see Route 10).
4. Angora (see Routes 10, 10 N).
5. Kozanlı (see Routes 10 K, 8 N).
6. Ak Shehir (see Route 10).
7. Afium Kara Hissar (see Routes 13, 16 A).

TALAS, alt. from 3,500 to 4,000 ft.; P. and T.; pop. 8,000 to 10,000—Turks, Greeks, and Armenians.

General description.—The town is situated at the SE. end of the plain of Kaisari, some 5 or 6 miles from the city. It covers the face of a steep broken slope at the foot of Ali Dagħ and at the mouth of a narrow gorge in the volcanic rock. The Turkish quarters are on level ground at the foot of the slope; above it, clambering in terraces among rocks, ravines,

and orchards, the Christian portion of the town rises 500 to 600 ft. to an undulating plateau behind.

The houses are built of soft volcanic rock. Their upper stories frequently overhang, and the flat roof of one building sometimes abuts against the lowest floor of the one above. The streets are narrow and winding and often mere flights of steps. They frequently lead under buildings as stone-vaulted passages, entered by mediaeval gateways, and may suddenly open on to a deep ravine spanned by a bridge, with a waterfall and gardens and orchards in the bottom.

Talas has an American mission house with hospital attached.

A certain amount of weaving is done in the town.

Supplies.—Water is plentiful. Streams come from the high land behind and are carried into gardens in channels for irrigation. Except the orchards, which are numerous, there are no trees in the whole district.

Communications.

I. *Road* (see Kaisari).

II. *Telegraph* to Kaisari and Everek.

ULUBORLU (anc. Apollonia Sozopolis), alt. 3,830 ft., head-quarters of a kaza in the Isparta sanjak of the Konia vilayet.

General description.—The town is prettily situated on a hill-side among fine orchards. The old citadel is built on a remarkable rock and the houses of the Greek population are clustered round it.

Supplies and commerce.—The chief local products are cereals.

Communications.—Routes described in this volume connect the town with

1. Dineir (see Route 22).

2. Yalovach (see Route 22).

YALOVACH (anc. Antiocheia), alt. 3,460 ft., head-quarters of the kaza of the same name in the Isparta sanjak of the Konia vilayet; P. and T.; pop. purely Moslem.

General description.—The town lies among fine gardens and is well supplied with water. It straggles over a wide area

and consists of 12 mahalles. There is an agency of the Anatolian Railway.

Supplies and commerce.—The vine is extensively cultivated and considerable quantities of cereals are grown. Some tanning is also carried on.

Communications.—Routes described in this volume connect the town with

1. Dineir (see Route 22).
2. Afium Kara Hissar (see Routes 22, 31, 33).
3. Ak Shehir (see Routes 26, 27).
4. Konia (see Route 22, mile 87½).
5. Bey Shehir (see Routes 22, 29).
6. Egerdir (see Route 30).

YAPAN HAMMAM, head-quarters of the kaza of the same name in the merkez-sanjak of Angora. It is a purely modern town, about a generation old, and owes its importance to its healthy situation and hot springs.

Communications.—Routes described in this volume connect Yapan Hammam with

1. Sivri Hissar (see Route 10 N).
2. Polatly (see Route I).
3. Angora (see Route 9).
4. Seraī Önü (see Route 8).

N.B. The administrative status of some of the above towns has been altered during the war (see Vol. I, p. 218).

GLOSSARY OF WORDS COMMONLY USED IN PLACE-NAMES

Achma, open.
Achyk, open, level.
Ada, island.
Afiun (Afion), opium.
Agha, master, sir.
Aghaj (*vulg.* **Aghach**), tree.
Aghyl, cattle-pen, sheep-fold.
Aghyr (Akhyr), stable.
Aghyz, mouth, outlet.
Aidos, eagle.
Aine, mirror.
Ajem, Persian.
Ajy, bitter, sour.
Ak, white.
Akar, flowing (of water).
Akche, whitish.
Akhyr. See **Aghyr**.
Ala, Alaja, (1) high, (2) varied.
Alan, clearing (in a forest).
Alt, lower side, under side.
Alty, six.
Altyn, gold.
Ambar (Hambar), barn.
Armud, pear.
Arpa, barley.
Arslan (Aslan), lion.
Aryk, thin, lean.
Asar (Assar), monument.
Ashaghy, lower (*opp.* **Yokary**).
Aslan. See **Arslan**.
At, horse.
Atesh, fire.
Avdan, reservoir.
Ay, moon, month.

Ayasma, sacred spring.
Ayi, bear.
Azmak, dry torrent-bed.
Baba, father.
Badem. See **Padem**.
Bagh, vineyard.
Baghche, garden.
Bakyr, copper.
Bal, honey.
Balta, axe.
Balyk, fish.
Bash, head.
Bayat, old, stale.
Bayr, hill, slope.
Bazar, market.
Bel, pass over a mountain range.
Belend (Bilan), ridge.
Belud (Pelit), oak.
Besh, five.
Bey, gentleman, master.
Beyaz, white.
Bilan. See **Belend**.
Bin, thousand.
Bir, one.
Bogha, bull.
Boghaz, gorge, strait.
Bostan, garden.
Böyük. See **Büyük**.
Boz, grey; bare (of mountains).
Bozja, greyish.
Bujak, angle.
Bük (ü), bush.

Bulak, spring.
Bunar. See **Punar**.
Burnu (**Burnu** ; lit. 'nose'),
 spur, promontory.
Büyük (**Böyük**), big.
Bych, sawmill.

Chai, river.
Chakal, jackal.
Chal, fox.
Cham, pine.
Charshembe, Wednesday.
Chatak, settlement.
Chatal, split, forked.
Chaush, sergeant.
Chayr, meadow.
Cheltik, rice-field.
Cherkes, Circassian.
Cheshme, fountain.
Chibuk, pipe.
Chichek, flower.
Chiftlik, farm.
Chimen, turf, meadow.
Chine, spur (of a hill).
Choban, shepherd.
Chöl, desert.
Chukur, hole, pit ; deep, low-lying.
Chürük (*vulg.* **Choruk**), slug-gish, marshy.
Chynar, plane, maple.

Dagh, mountain.
Dam, (flat) roof.
Dar, narrow.
Dede, grandfather, deified ancestor.
Deirmen (**Deghirmen**), mill.
Deli, mad, raging.
Delik, hole.
Demir, iron.
Deniz, sea.
Depe. See **Tepe**.

Derbend (**Devrent**), pass,
 police station in a pass.
Dere, valley, stream.
Derin, deep.
Deve, camel.
Devrent. See **Derbend**.
Dib(i), foot of a hill.
Dish, tooth.
Doghan, falcon.
Dört, four.
Düden, underground river,
 entrance to an underground river.
Düldül, nightingale.
Düz, flat, level.

Egri (**Eyri**), crooked, bent.
Elma, apple.
Emir, prince.
Erik, plum.
Eshek, ass.
Eski, old.
Ev, house.
Evren. See **Ören**.
Eyri. See **Egri**.

Fasil(ler), parting of roads.
Frenk (**Firenk**), Frank, European.
Funduk (**Fyndyk**), nut.

Gechid, ford.
Gedik, pass, clearing (in a wood).
Geyik, roe.
Giaur, unbeliever, Christian.
Gök, (1) heaven, (2) blue.
Gökje, bluish.
Göl, lake.
Gönük (**Künük**), ditch, gutter,
Göverjin, dove.
Göz, (1) eye, (2) spring, brook.
Gül, rose.
Gülgen, elm.

Gümtüş, silver.

Güzel, beautiful.

Hach, cross.

Haji, pilgrim (to Mecca).

Hambar. See **Ambar**.

Hammam (**Hamam**), bath-house, bath, hot spring.

Han(e). See **Khan(e)**.

Harman, threshing-floor.

Hissar, castle, fort.

Hüyük. See **Üyük**.

İki, two.

İl, people, district.

İlija, hot spring.

In, cave.

Inek, cow.

Inje, thin, slender.

Injir, fig.

Irmak, river.

Iskele, landing-place, railway station.

Jamy, mosque.

Jebel, mountain.

Jeviz, walnut.

Jihan, world.

Juma, Friday (the Turkish Sunday).

Kady, judge.

Kahve, coffee-house.

Kale, castle, fort, any ancient ruin on a hill.

Kalejik, little castle.

Kanly, bloody; two-wheeled cart.

Kaplan, tiger.

Kapu, gate, defile.

Kar, snow.

Kara, black.

Karaja, blackish.

Karakol, police station.

Karanfyl, pink, carnation.

Kardash, brother.

Kartal, eagle.

Karie, village.

Karynja, ant.

Kash, eyebrow.

Kassaba, small market town.

Katyr, mule.

Kavak, poplar (*also* plane, lime-tree).

Kaya, rock.

Kaz, goose.

Kaza, an administrative district.

Kazan, pan.

Kechi, goat.

Kel, bald, bare.

Kemer, arch, bend.

Kesik, broken.

Kestane, chestnut.

Khan (**Han**), khan, caravan-serai.

Khane (**Hane**), house.

Khoja, master, teacher.

Kilisse, church.

Kiraz (**Kirez**), cherry.

Kirij, lime.

Koch, ram.

Koï, creek. See also **Koyun**.

Köi, village.

Koja, husband, large.

Kol, arm, branch.

Kömür, coal.

Konak, large house, town hall.

Köpek, dog.

Köprü, bridge.

Köse, beardless, bare.

Koyun (*vulg.* **Koï**, **Kuyun**), sheep.

Koyunlu, rich in sheep.

Koz, walnut.

Küçük, little.

Kul, servant, slave.

Kulak, ear.

Kum, sand.
Kümbet, tower, dome.
Künük. See **Gönük**.
Kürd, Kurd.
Kurd. See **Kurt**.
Kurshun, lead.
Kurt (**Kurd**), wolf.
Kuru, dry, arid.
Küşhe, corner.
Kush, bird.
Kuyu, well.
Kuyun. See **Koyun**.
Kuzu, lamb.
Kylyj, sword.
Kyr, barren, arid.
Kyrk, forty (often used of any large number).
Kyryk, broken.
Kyshla (**Kyshlak**) winter quarters, barracks, winter village.
Kyssa, short.
Kysyk, compressed, narrow.
Kyz, girl.
Kyzyl, red.
Kyzylja, reddish.
Liman, harbour, bay.
Lokanda, inn, restaurant.
Maden, mine, metal.
Maghara, cavern, den.
Mahalle, quarter (of a town).
Mal, treasure.
Mandra, cattle-pen, fold.
Medresse, theological college.
Meidan, open space, square (in a town).
Merdiven, stair, ladder.
Merkeb, ass.
Merkez, market, administrative centre.
Mesjid, small mosque.
Mezar, grave.

Mezarlyk, cemetery.
Mudir, governor of a nahie.
Muhajyr, immigrant, refugee.
Mukhtar, headman of a village.
Musafyr, guest, stranger.
Nahie, an administrative district, parish.
Oba, tent, farm, village.
Obruk, pit, hole.
Oda, room, guest-room in villages.
Odun, wood.
Oghlan, boy.
Oghul (*possessive Oghlu*), son.
Öküz, ox.
Oluk, spout, gutter.
-ön (**-önü**), front part.
Ordu, camp, army corps.
Ören (**Evren**, **Viran**), ruins.
Orman, wood, forest.
Orta, middle.
Ot, grass.
Otuz, thirty.
Ova, plain, meadow.
Öyük. See **Üyük**.
Öz(ü), stream.
Padem (**Badem**), almond.
Pambuk, cotton.
Parmak, finger; crag.
Pashia, pasha.
Pelit. See **Belud**.
Pershembe, Thursday.
Poyraz, north wind.
Porsuk, badger.
Punar (**Bunar**), spring, fountain.
Rum (**Urum**), Greek.
Sakyz, resin.
Saman, straw.

- Sanjak**, administrative district.
Saraï. See **Seraï**.
Sarnych (Sarych), cistern.
Sary, yellow.
Sarymsak, garlic.
Saz, reed.
Scala, landing-stage.
Seki, terrace, step.
Seraï (Saraï), palace.
Shab, alum.
Shehir (Shehr, Shahr), town, city.
Sheitan, devil.
Sirke, vinegar.
Sivri, sharp, pointed.
Siyah, black.
Soghan, onion.
Söğüd (Söyüd). See **Sügüt**.
Sorghun, poplar.
Sowuk, cold.
Su, water.
Sügüt (Söğüd, Söyüd), willow.
Susuz, waterless.
Sychan, mouse.
Syghyr, ox, buffalo.

Takhta, board, plank.
Taslı, stone.
Tavshan, hare.
Teke (Tekie), a monastery for dervishes.
Tepe (Depe), hill.
Tilki, fox.
Toprak, earth.
Torba, bag.
Toz, dust.
Tülek (Tülük), sparrow-hawk.
Türbe, shrine.
Tut, mulberry.
Tütün, tobacco.
Tuz, salt.
Tuzla, saline.

Üch, three.
Ufak, small.
Uj, end, point.
Ulu, large.
Urum. See **Rum**.
Ushak, servant, knave, peasant.
Üyük (Hüyük, Öyük), hill, mound.
Uzun, long.
Veran. See **Viran**.
Vezir, Vizier.
Vilayet, province.
Viran (Veran, Veren), ruined, ruins. See also **Ören**.
Yaban, wild.
Yagh, oil.
Yaghmur, rain.
Yaila, summer village, mountain pasture.
Yaka, bank, border.
Yakhshy (Yakhsha), good.
Yaly, river-bank or sea-shore ; summer dwelling.
Yalynyz, alone, solitary.
Yazyly, written, inscribed
Yedi, seven.
Yel, wind.
Yeni, new.
Yenije, newish.
Yer, place, earth.
Yeshil, green.
Yildirim, lightning.
Yilan, serpent.
Yimurta, egg.
Yokary, upper (*opp.* **Ashaghy**).
Yokush, slope.
Yol, road.
Yüksek, high.
Yürük, nomad.
Zeitin (Zeitun, Zaitun), olive.
Ziaret, sacred tomb.

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